

TR-22HB DIAGRAMS



TR-22
High Band Conversion Kit



RADIO CORPORATION OF AMERICA

ELECTRONIC RECORDING PRODUCTS

INSTRUCTIONS

TR-22

High Band Conversion Kit

DIAGRAMS

MI-43234

RADIO CORPORATION OF AMERICA
BROADCAST AND COMMUNICATIONS PRODUCTS, CAMDEN, N.J.

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BR 697

IB-32114

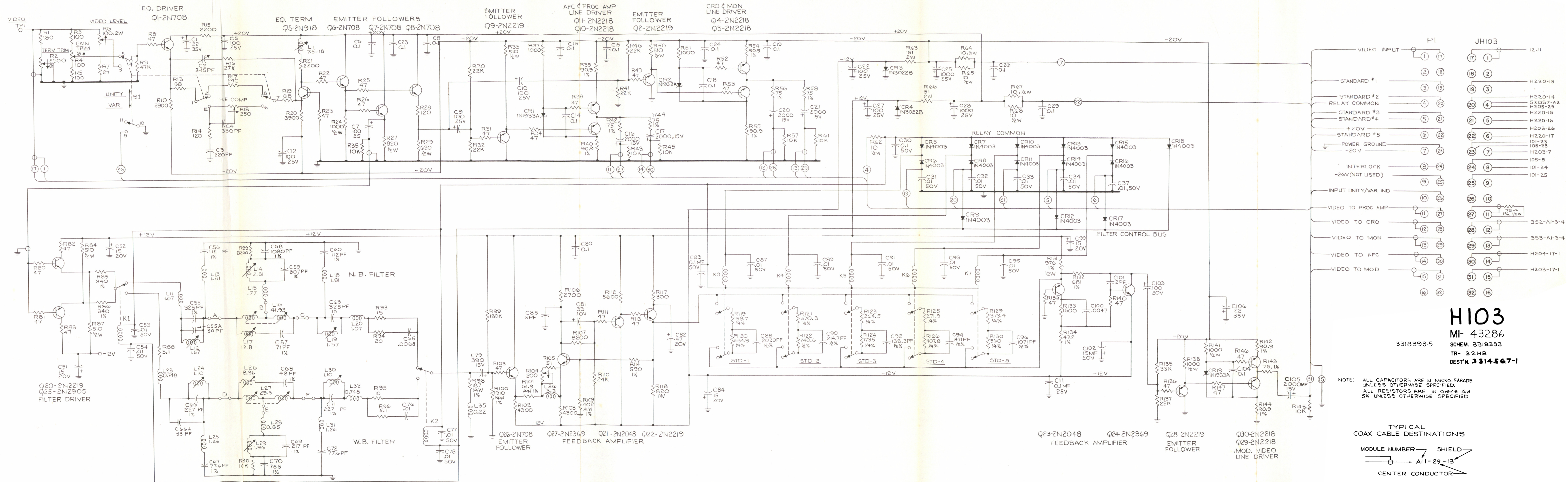
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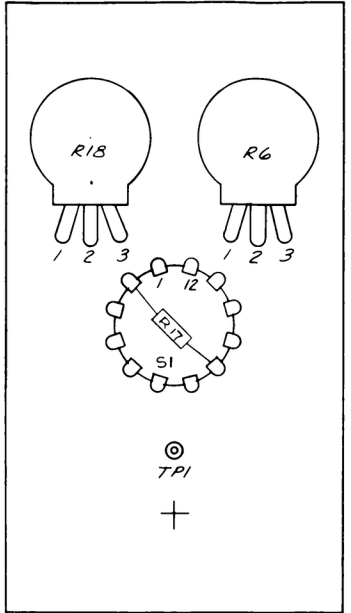
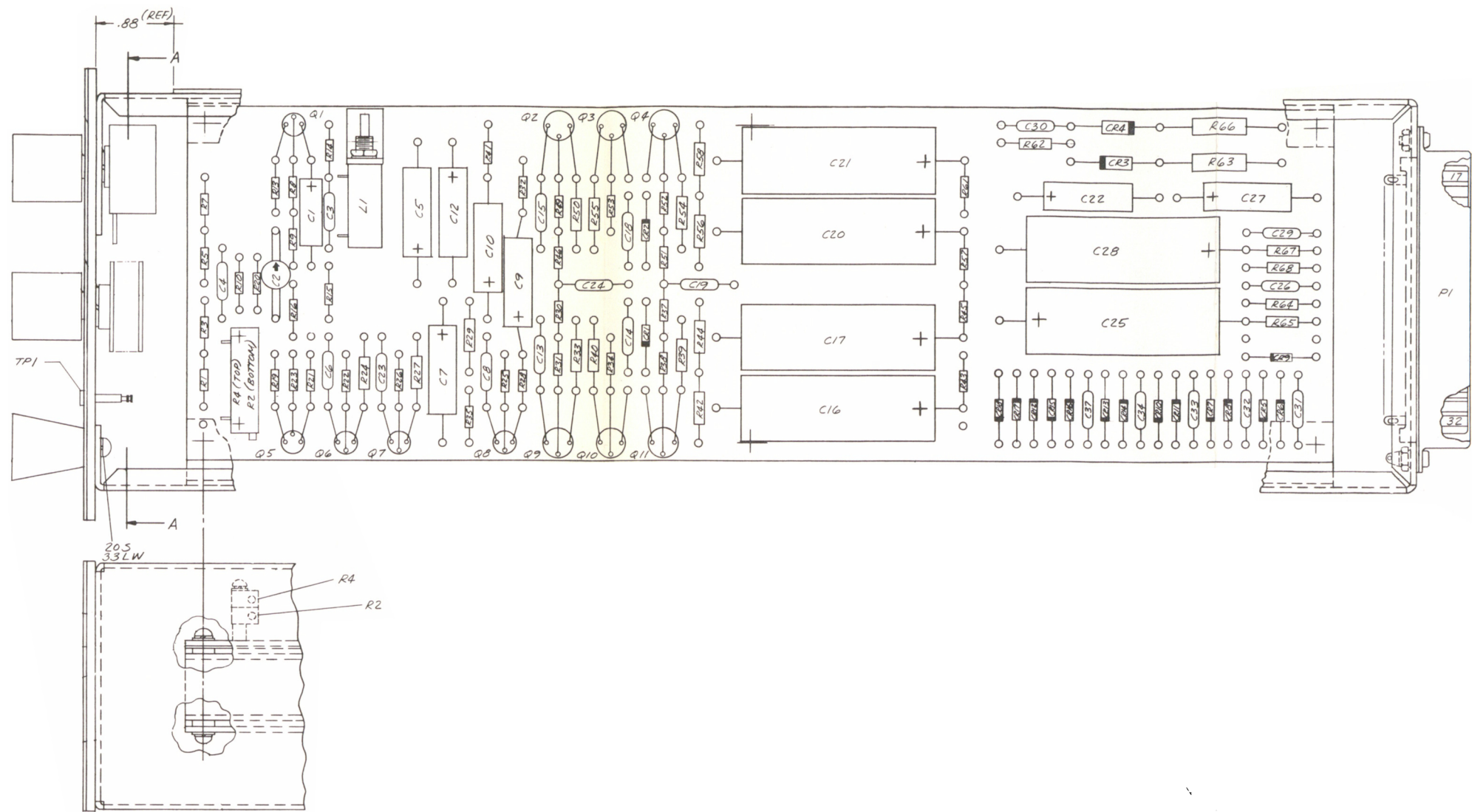
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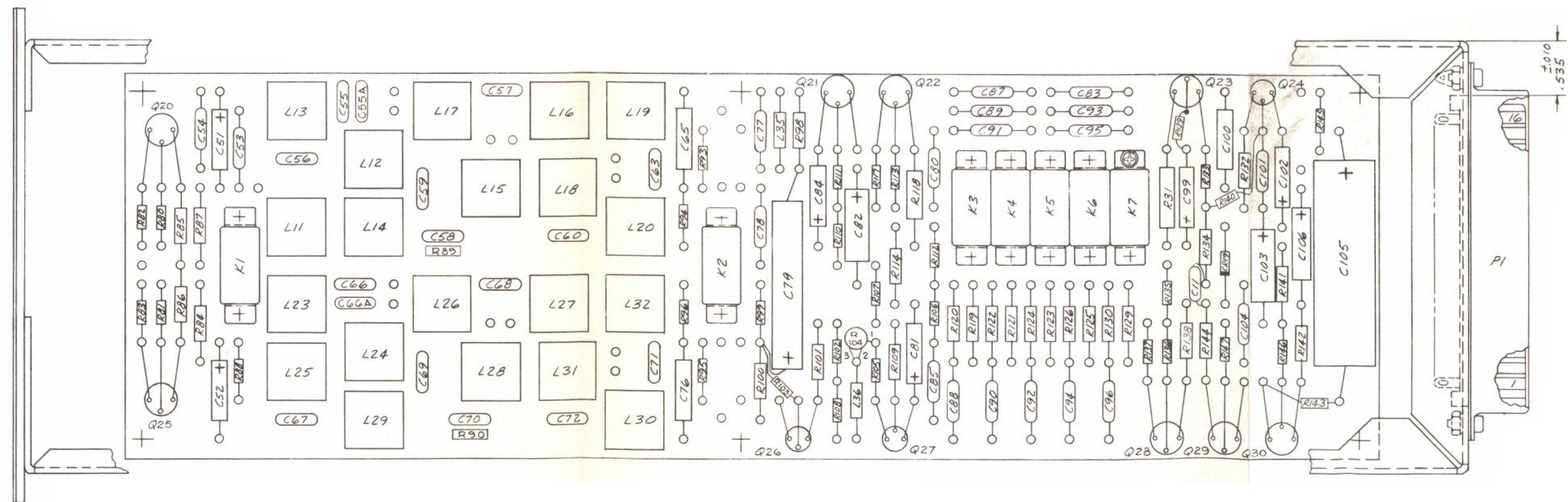
* Use Drawing Number 3318729 for Machines with modified 2-speed capstan (Serial numbers 1101-1200)



**Figure 1—Video Input Schematic
(3314567/3318393)**



VIEW A-A



NOTES
1- BLACK BAR INDICATES CATHODE
END OF BAR

FOR LIST OF MATERIALS
SEE 3310900-502

H103
MI-43268
3318625-1

Figure 2—Video Input Assembly
(3318625)

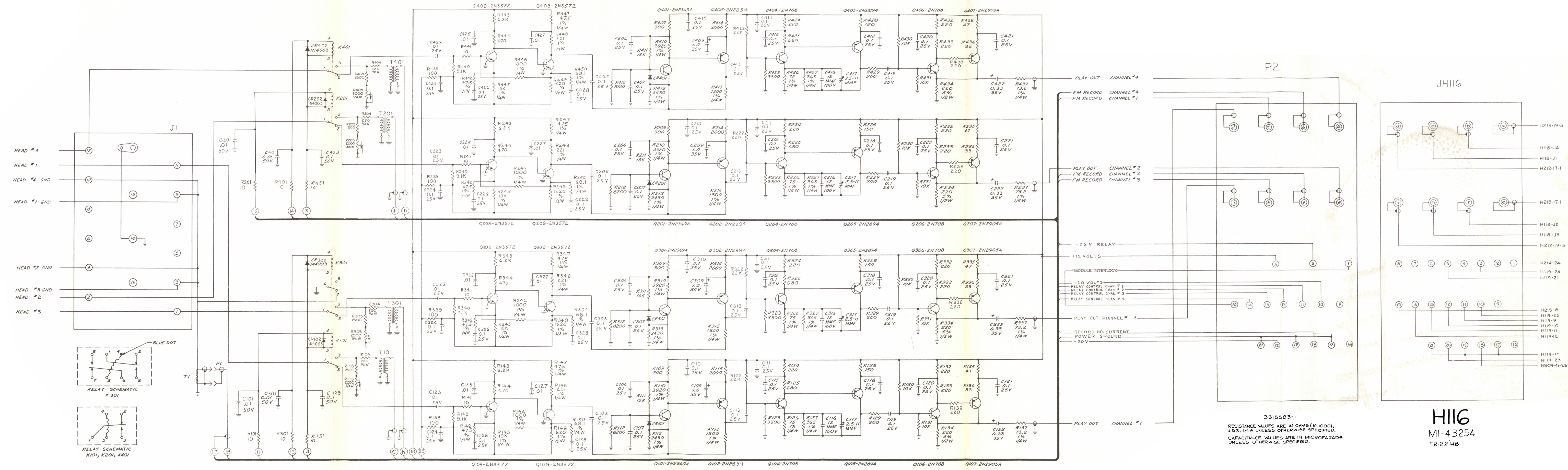
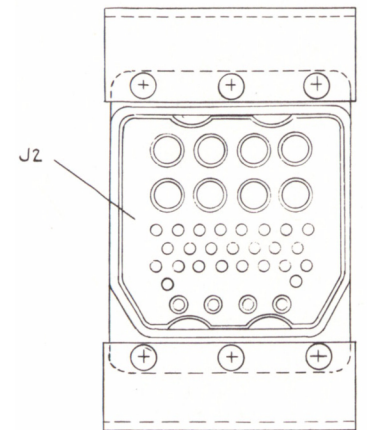
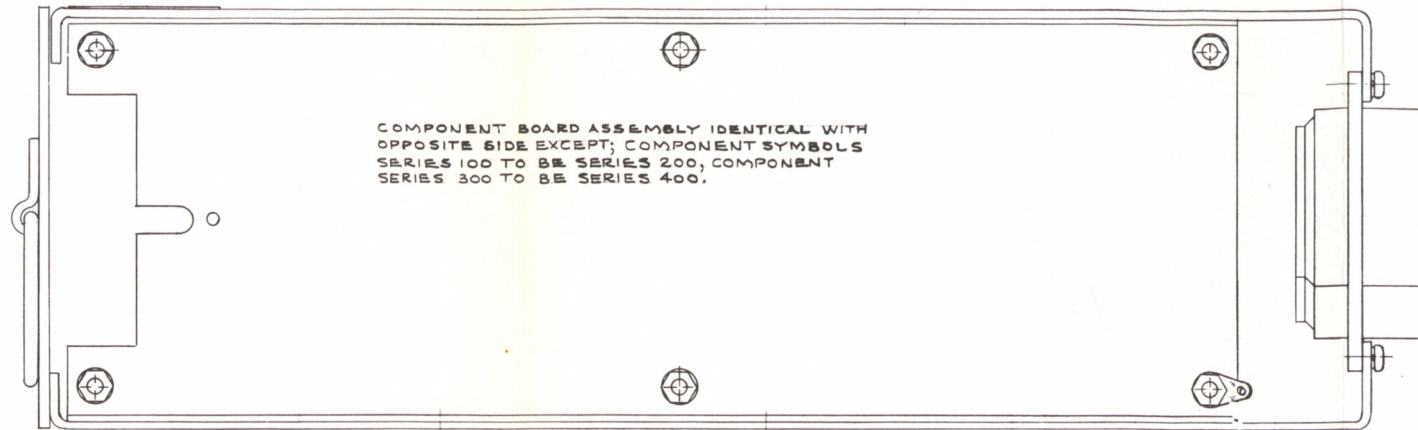
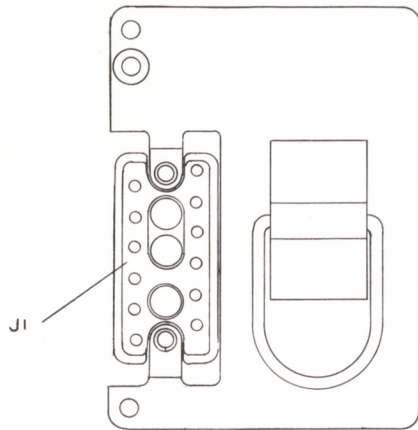
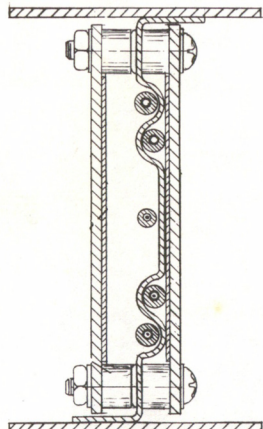
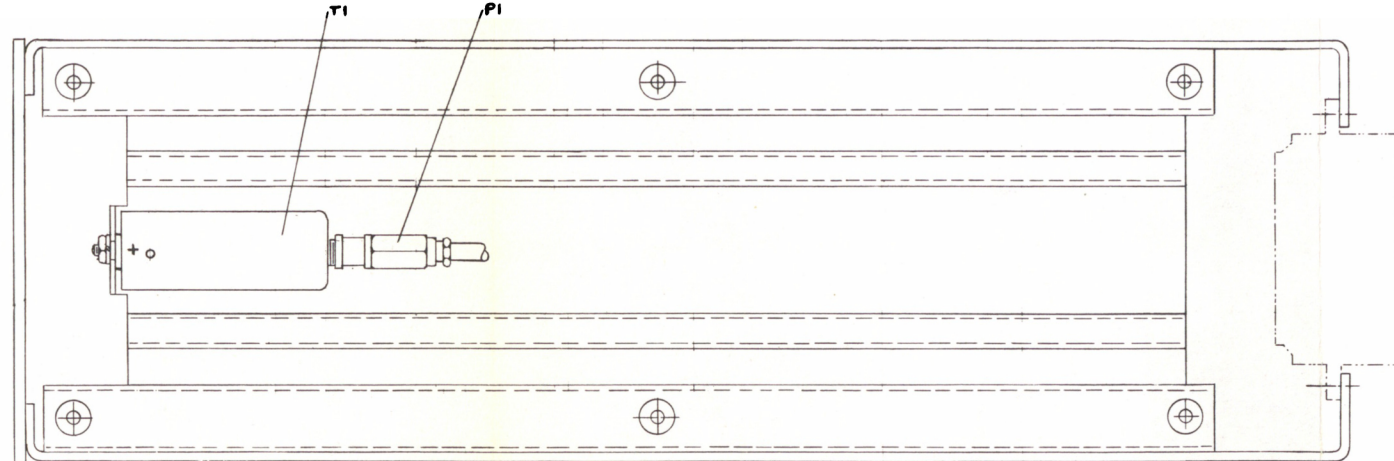


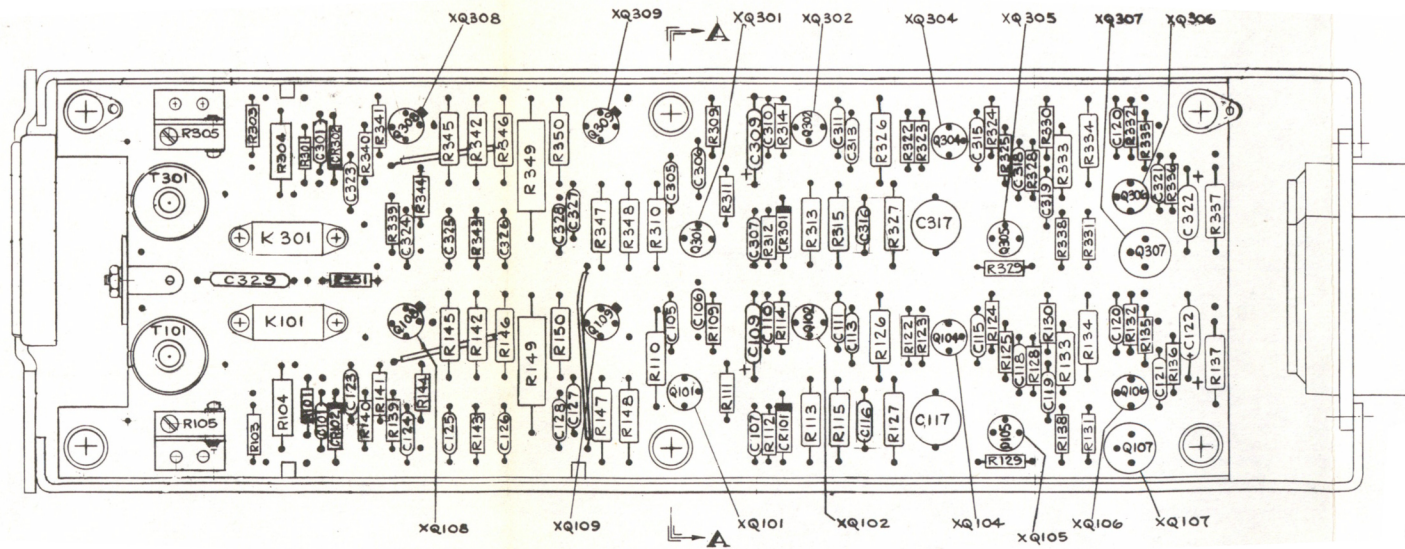
Figure 3—Video Preamplifier Schematic
(3318583)



VIEW AS ABOVE
WITH COMPONENT
BOARD REMOVED.



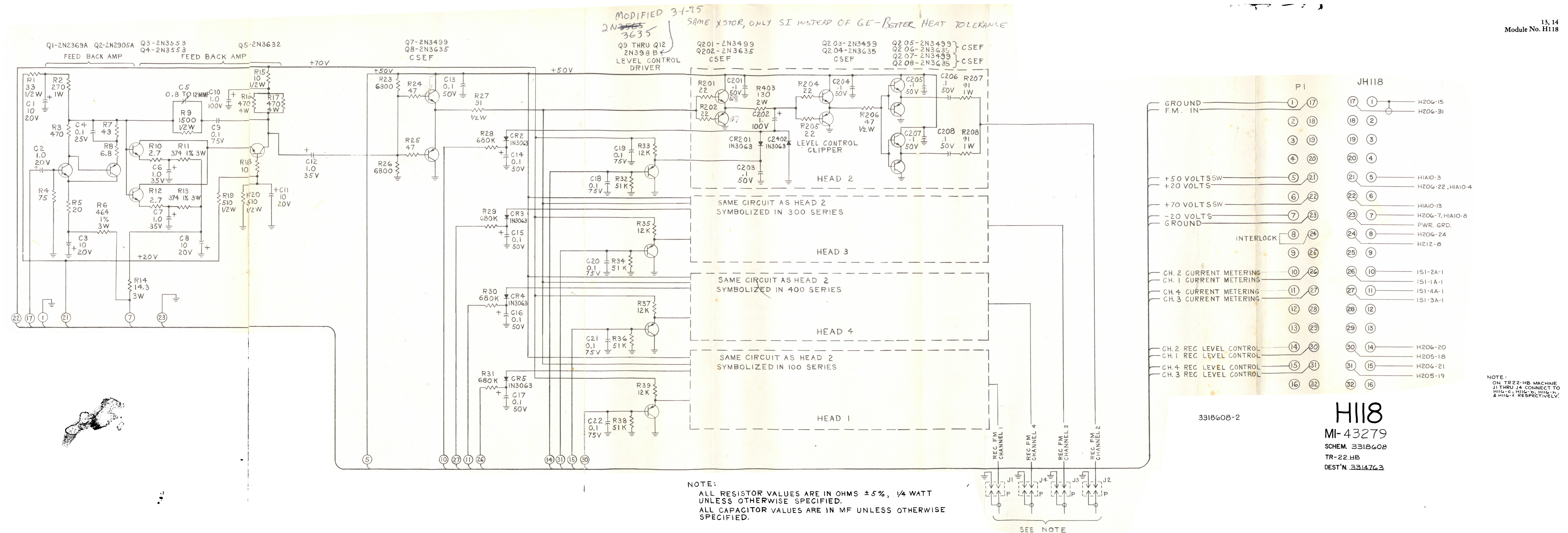
SECTION A A

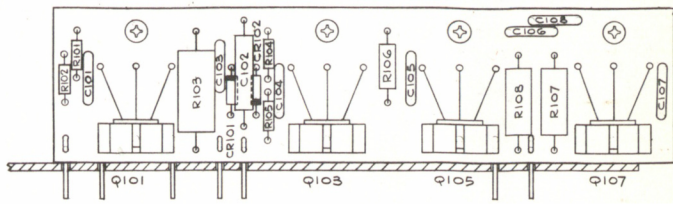


H116
PREAMPLIFIER
MI-43254
SCHEM. 3318593-1

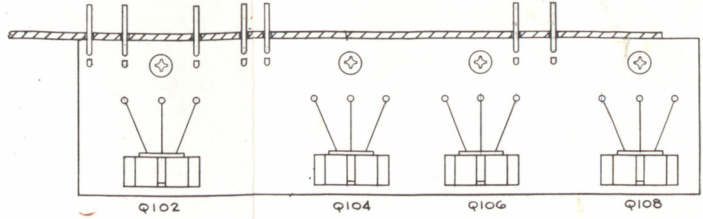
FOR LIST OF PARTS SEE 3311399-501

**Figure 4—Video Preamplifier Assembly
(3318240)**

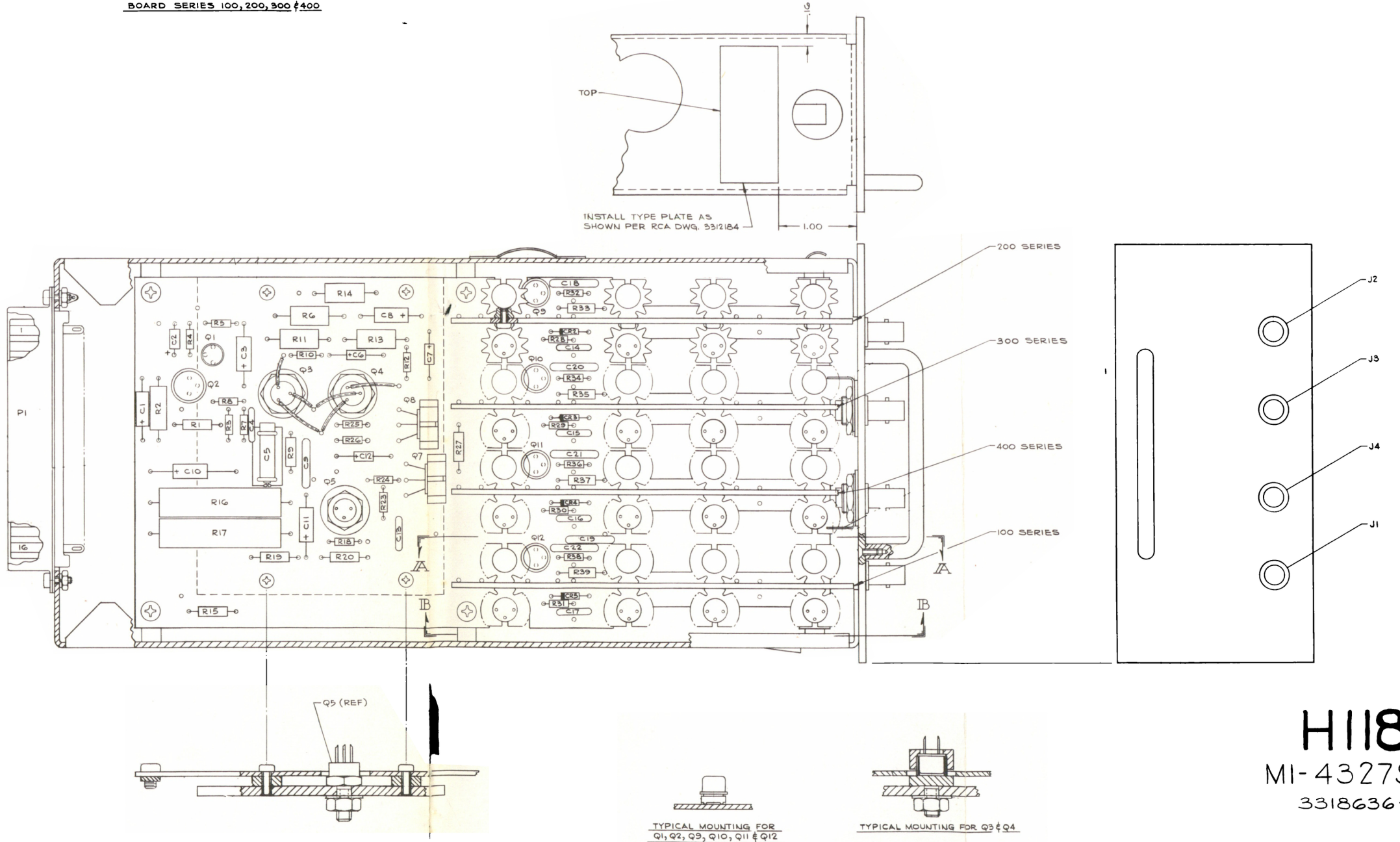




VIEW TB-TB
TYPICAL COMPONENT LAYOUT FOR
BOARD SERIES 100, 200, 300 & 400



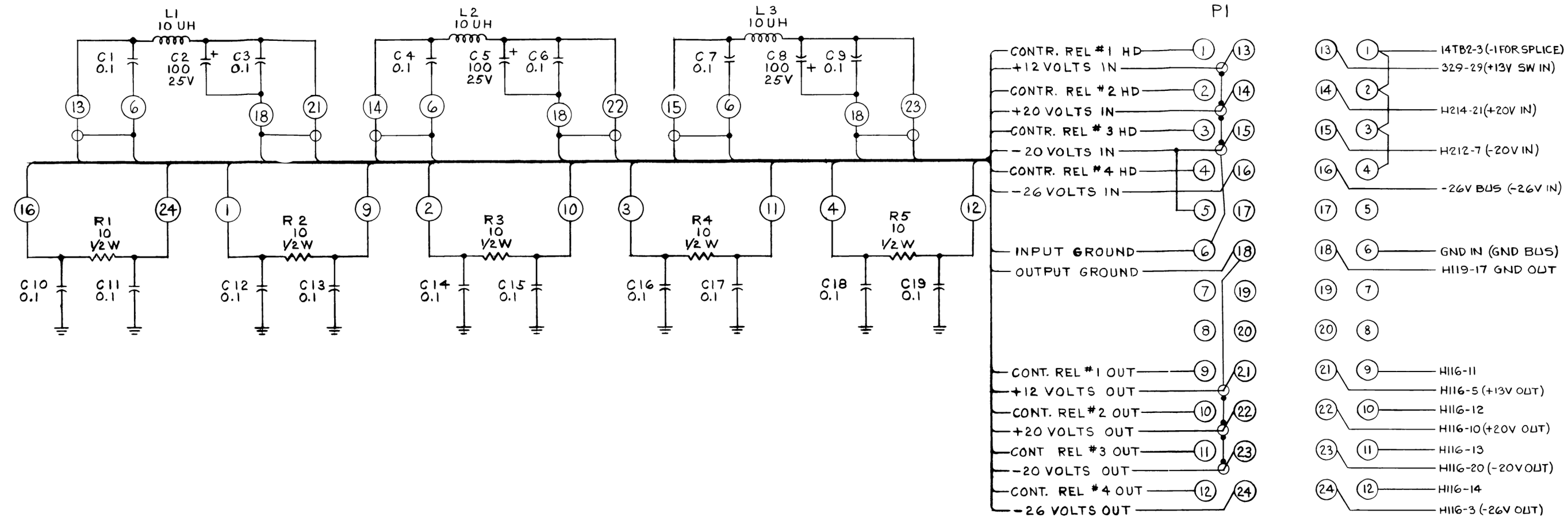
VIEW A-A



H118
MI-43279
3318636-0

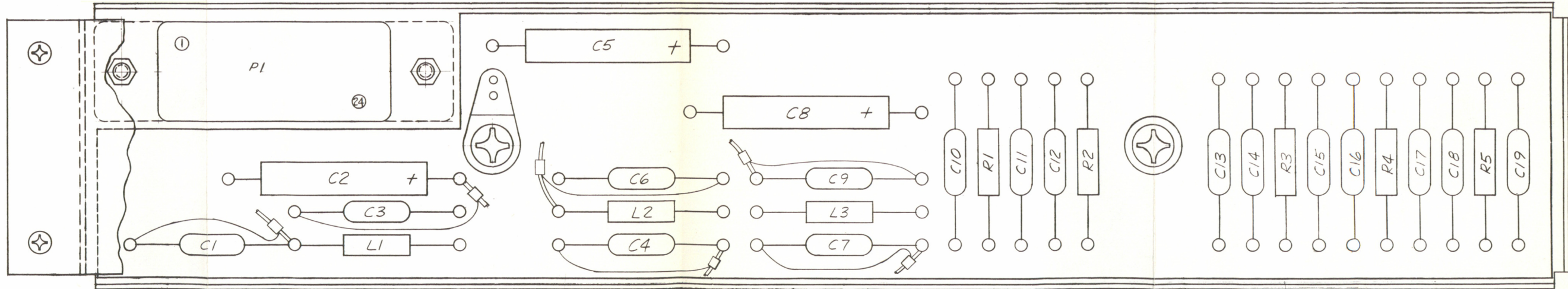
FOR LIST OF PARTS
SEE 3311400-501

**Figure 6—Record Amplifier Assembly
(3318636)**



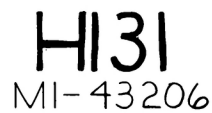
3318641-4

H119
MI-43231



FOR LIST OF MATERIAL
SEE 331459-501

Figure 7—Preamplifier Filter
(3314748/3318641)



3318660-3 TR-22 HB

NOTES:
1. RESISTANCE VALUES ARE IN OHMS, $\pm 5\%$, 1/4 W EXCEPT AS NOTED (K=1000).
CAPACITANCE VALUES 1.0 AND LESS THAN 1.0 ARE IN MICROFARADS,
AND VALUES MORE THAN 1.0 ARE IN MICROMICROFARADS UNLESS
OTHERWISE NOTED.

MODULE NUMBER — SHIELD
H132-17-1
CENTER CONDUCTOR —

**Figure 8—Video Processor Schematic
(3318660)**

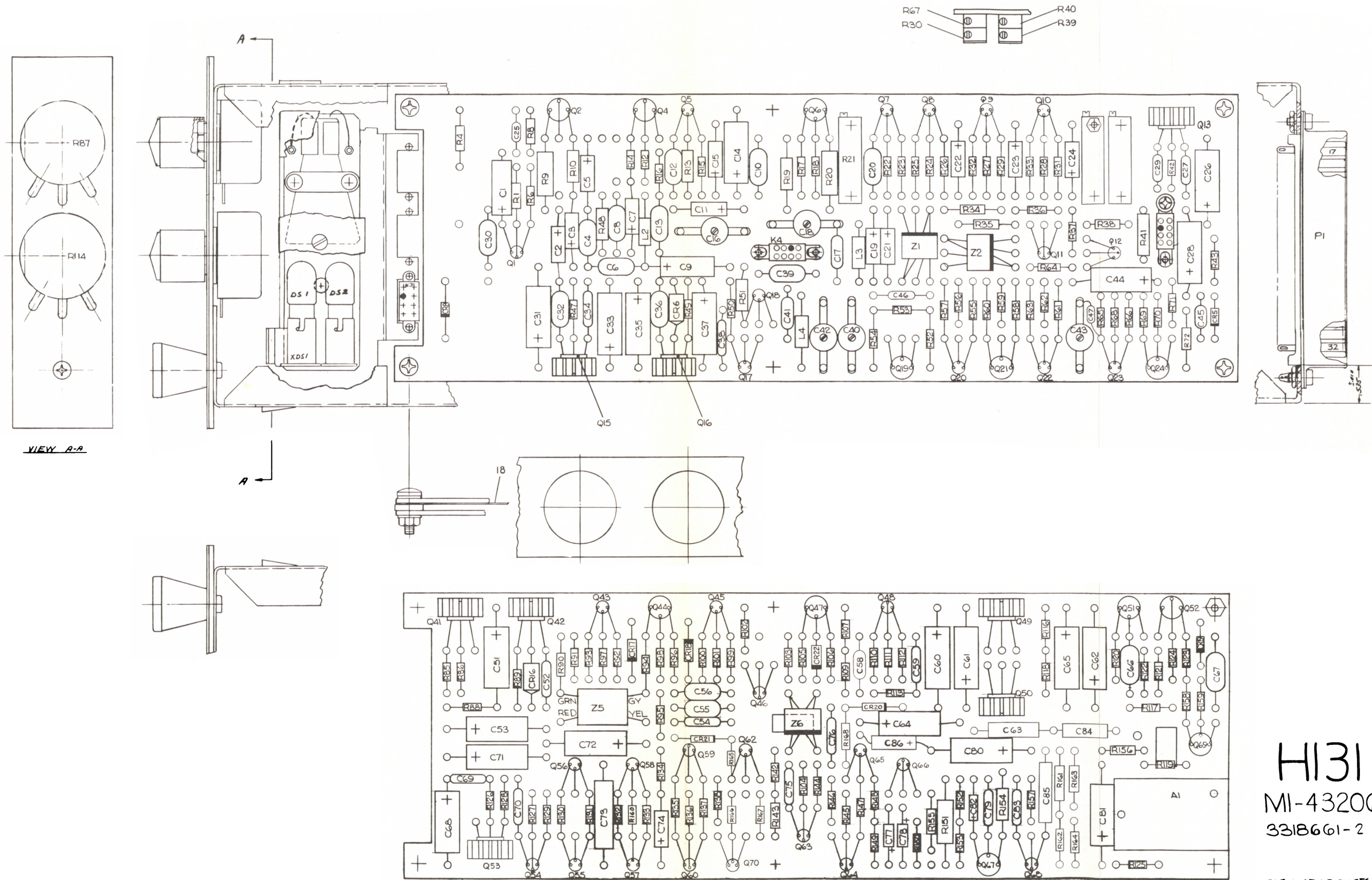
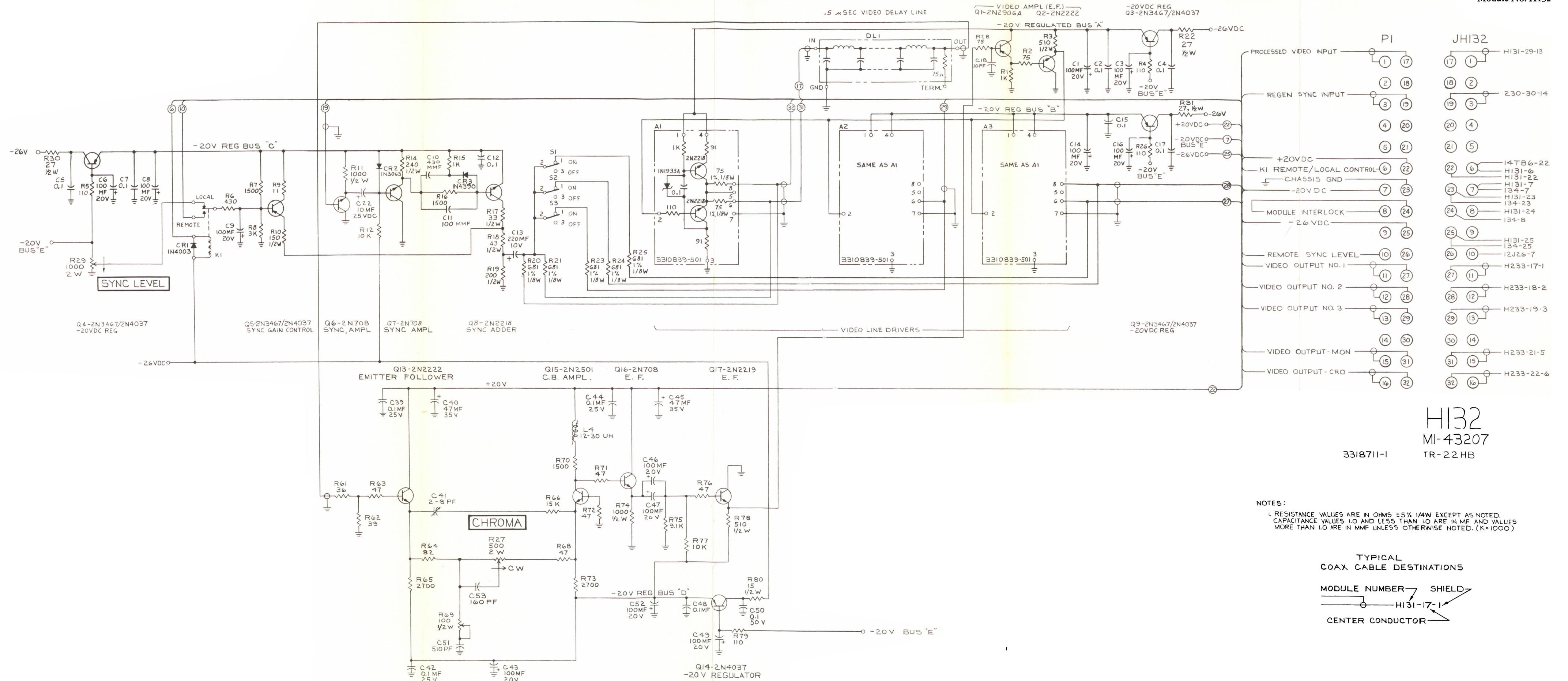
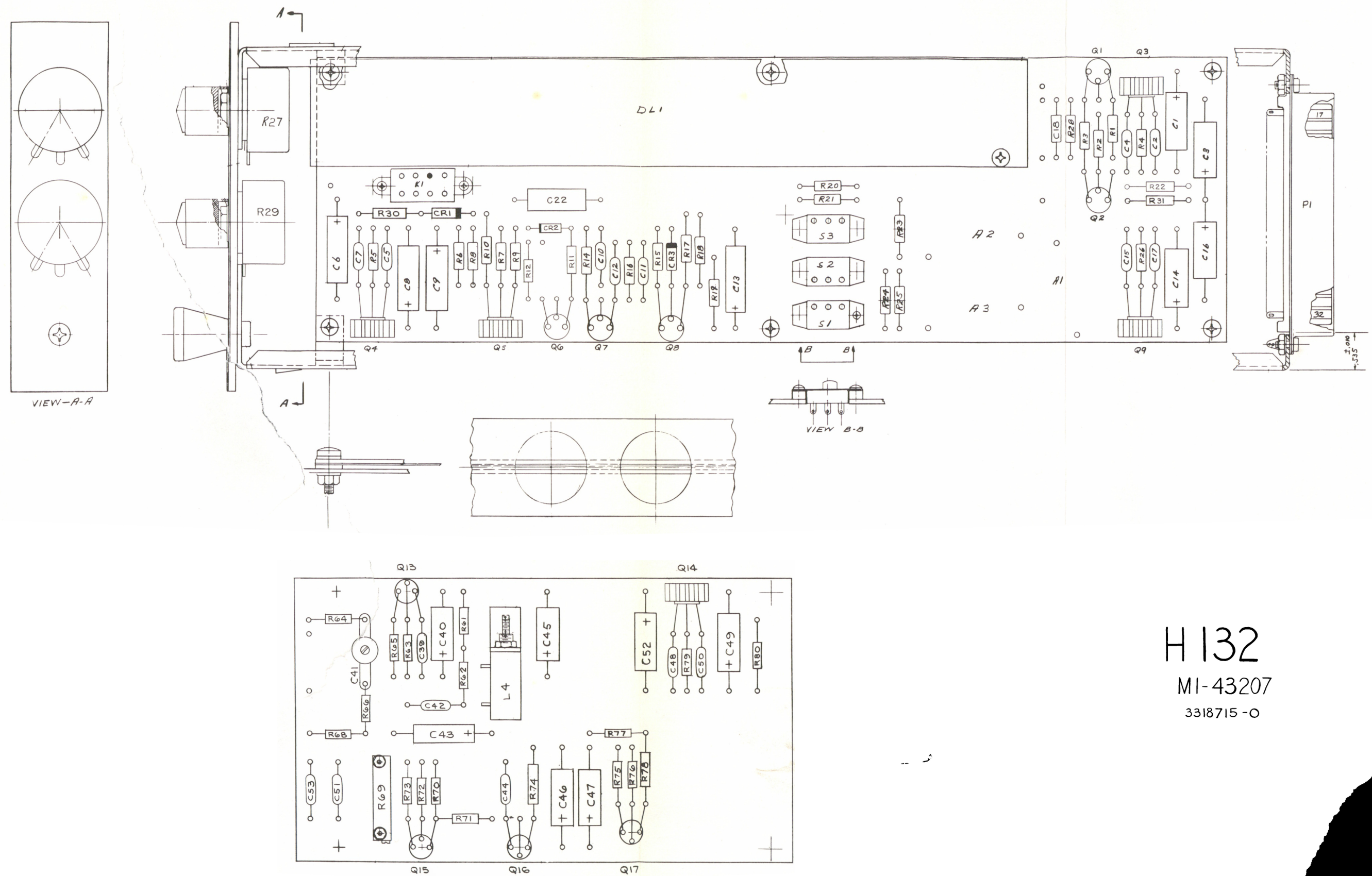


Figure 9—Video Processor Assembly
(3318661)

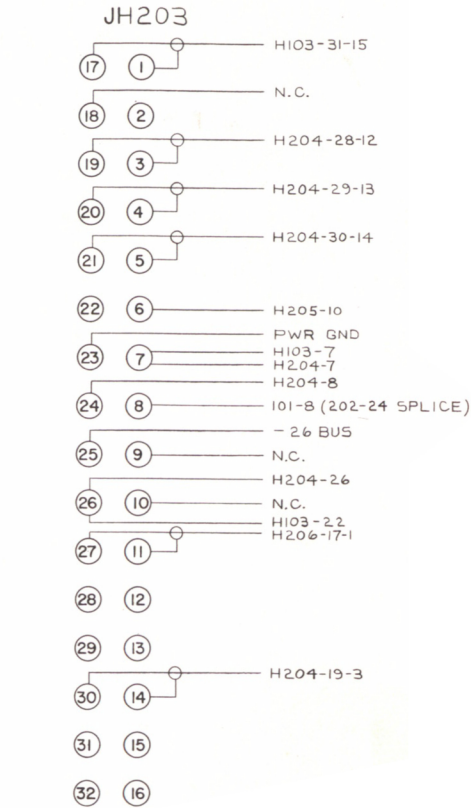
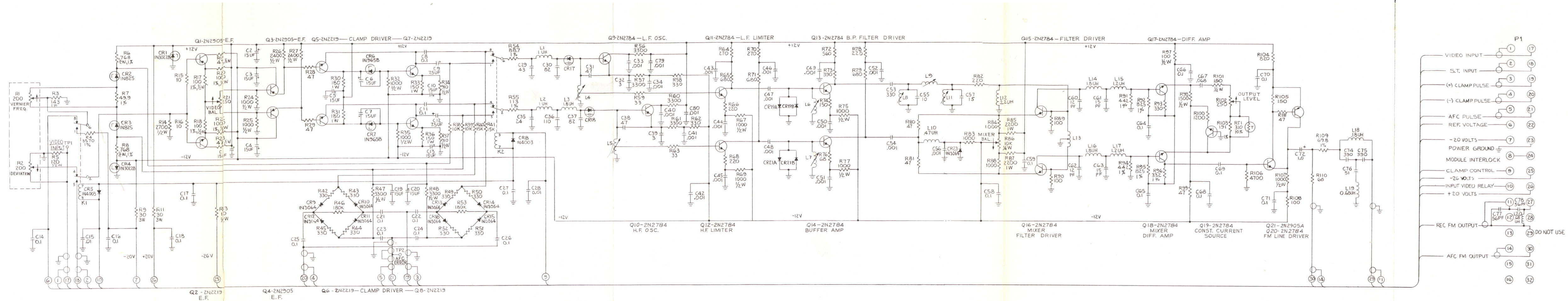


**Figure 10—Video Output Schematic
(3318711)**



H 132
MI-43207
3318715 -O

Figure 11—View
(3)



H203

MI-35916
SCHEM. 3318410
TR-22HB
DEST'N 3314572-1

3318410-7

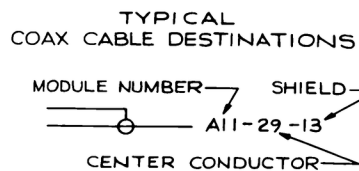
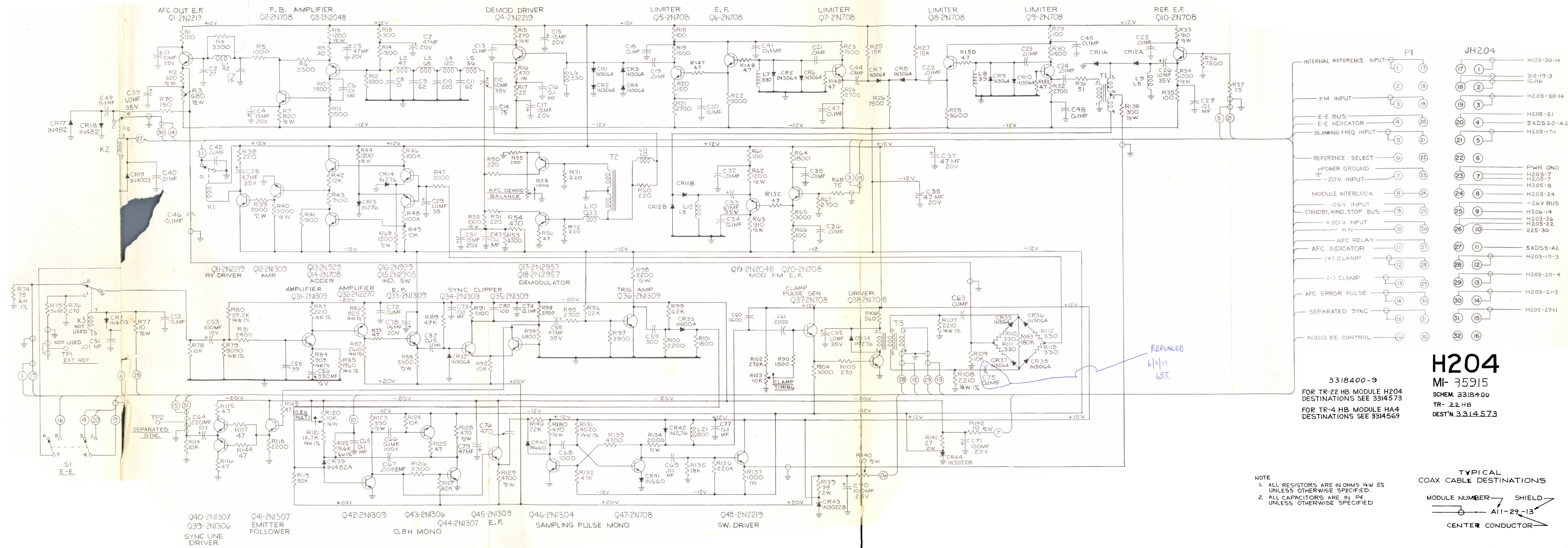


Figure 12—Modulator
(3314572/3318410)

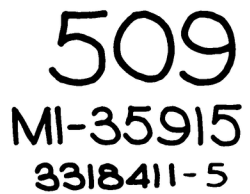


H204
MI-35915
SCHEM. 3318400
TR-22HB
DEST'N. 3314573

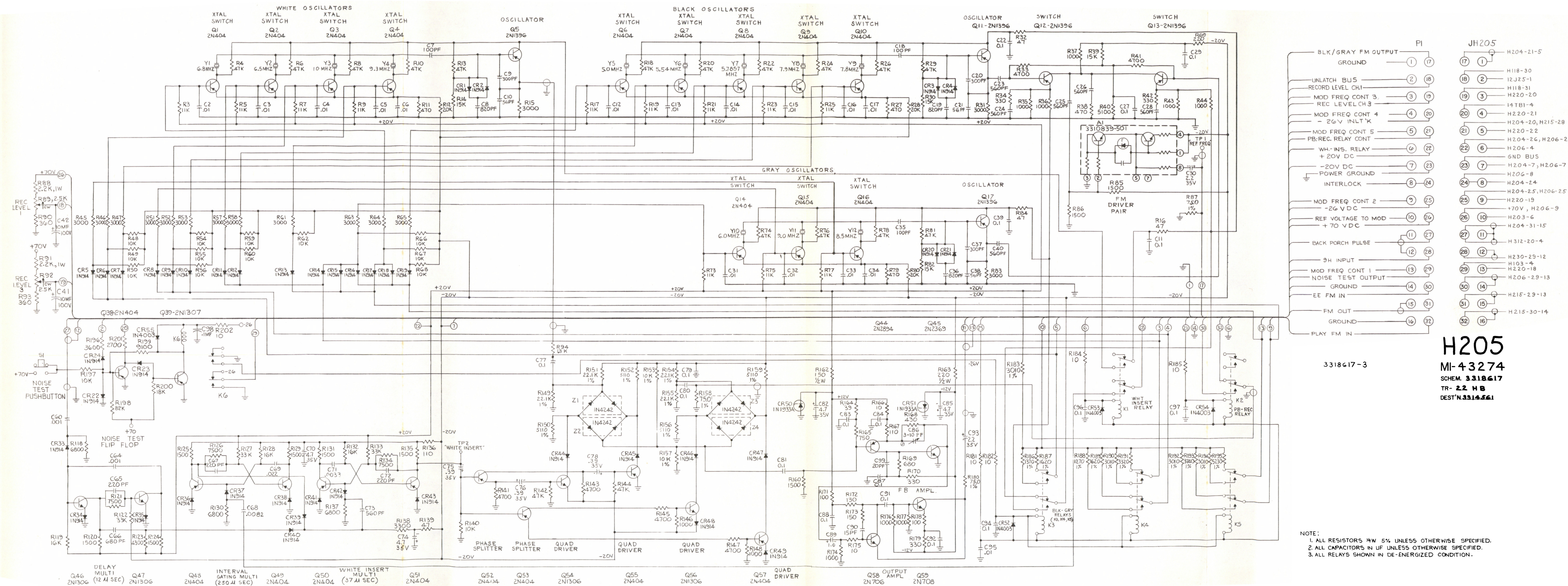
TYPICAL COAX CABLE DESTINATIONS

MODULE NUMBER	SHIELD	CENTER CONDUCTOR
11-29-13		

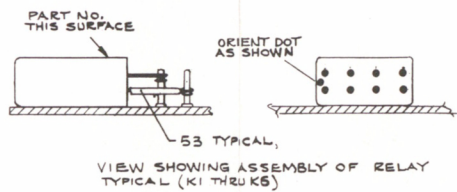
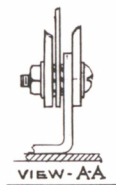
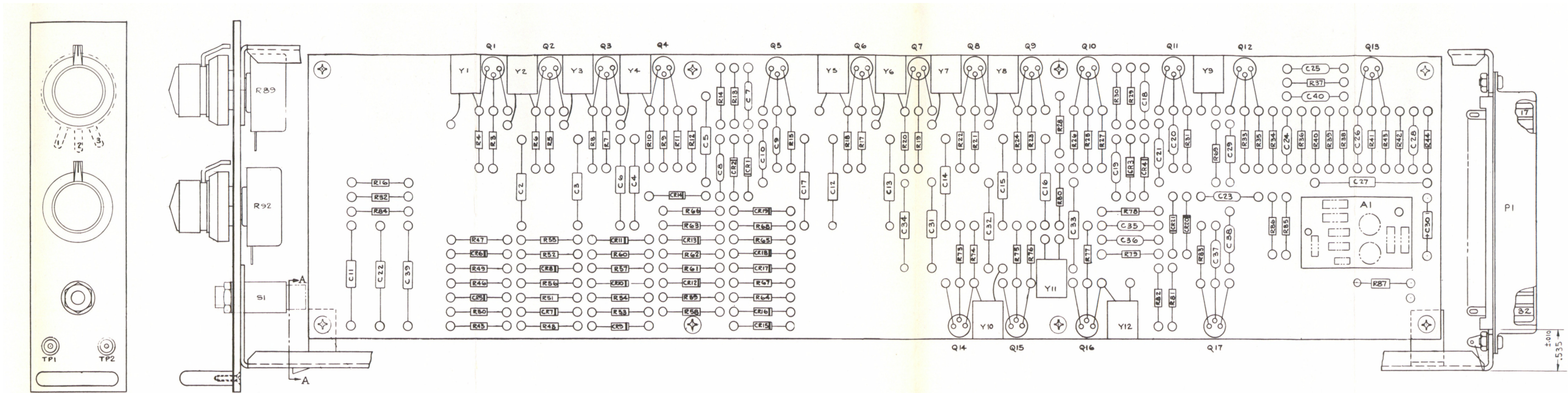
Figure 13—Modulator AFC Schematic (3314573/3318400)



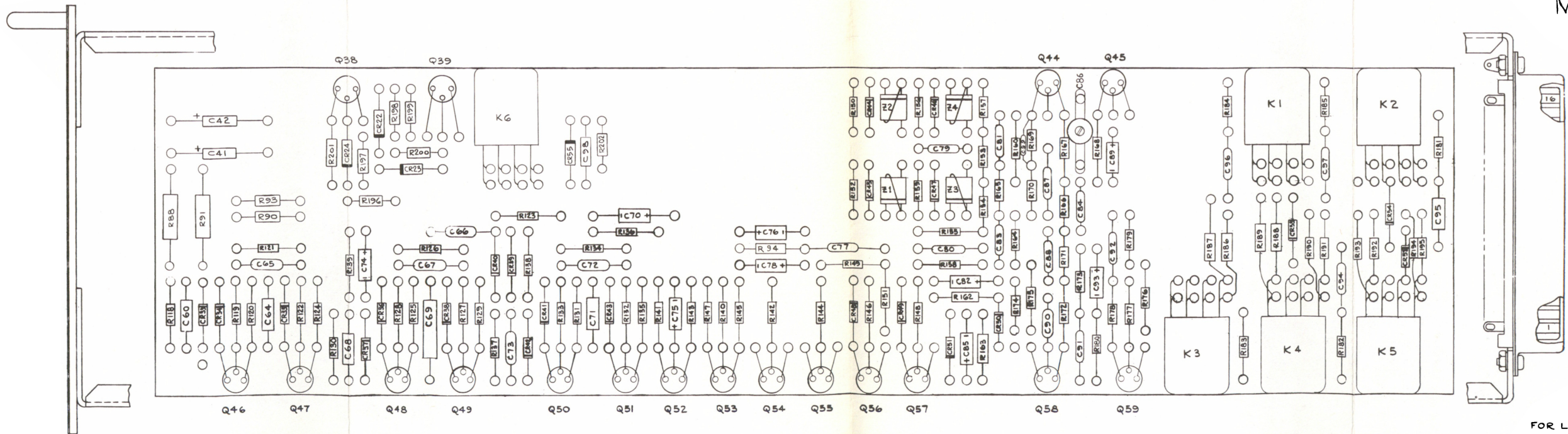
FOR LIST OF PARTS
SEE 3310903



**Figure 15—FM Reference Schematic
(3314561/3318617)**



H205
Mi-43274
3318615-2



FOR LIST OF PARTS SEE 3310902-502

Figure 16—FM Reference Assembly
(3318615)

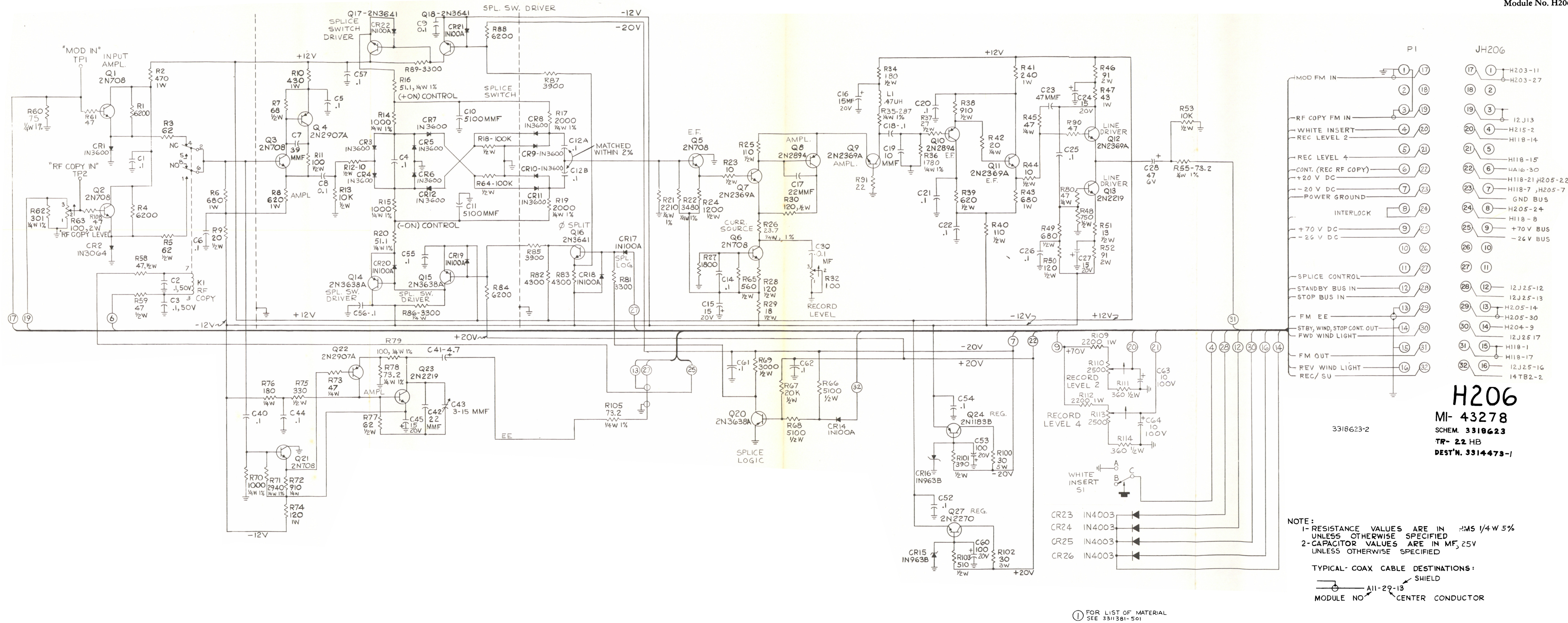
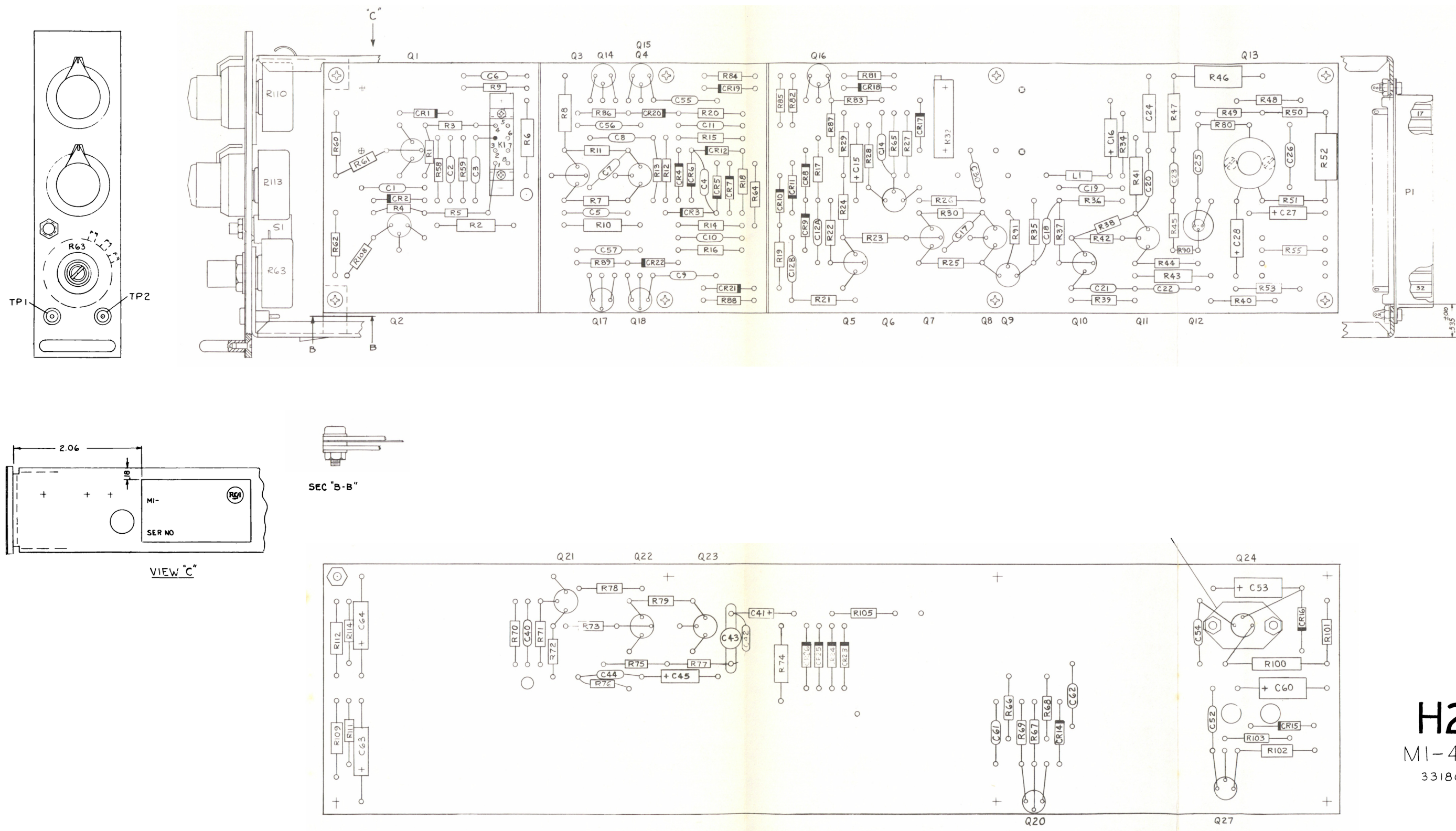


Figure 17—Record Switch Schematic
(3314473/3318623)



FOR LIST OF PARTS SEE 3311381-501

Figure 18—Record Switch Assembly
(3318607)

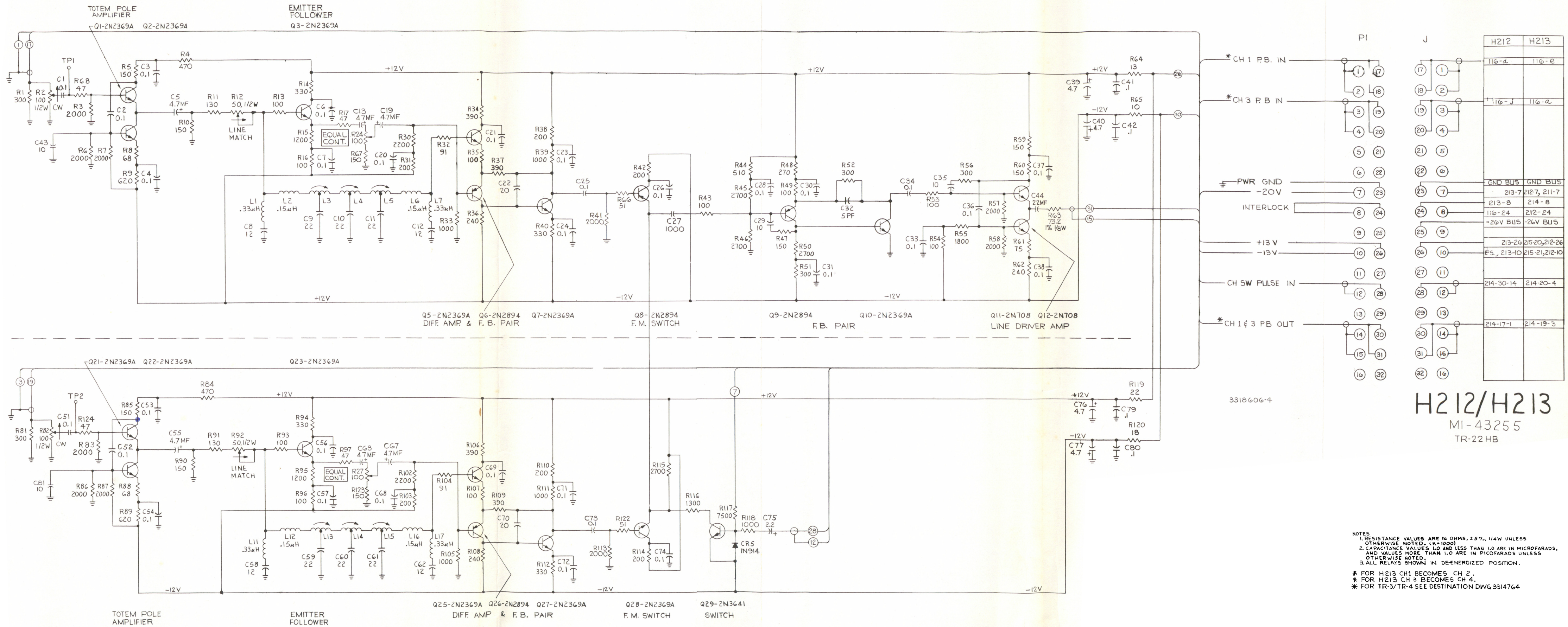
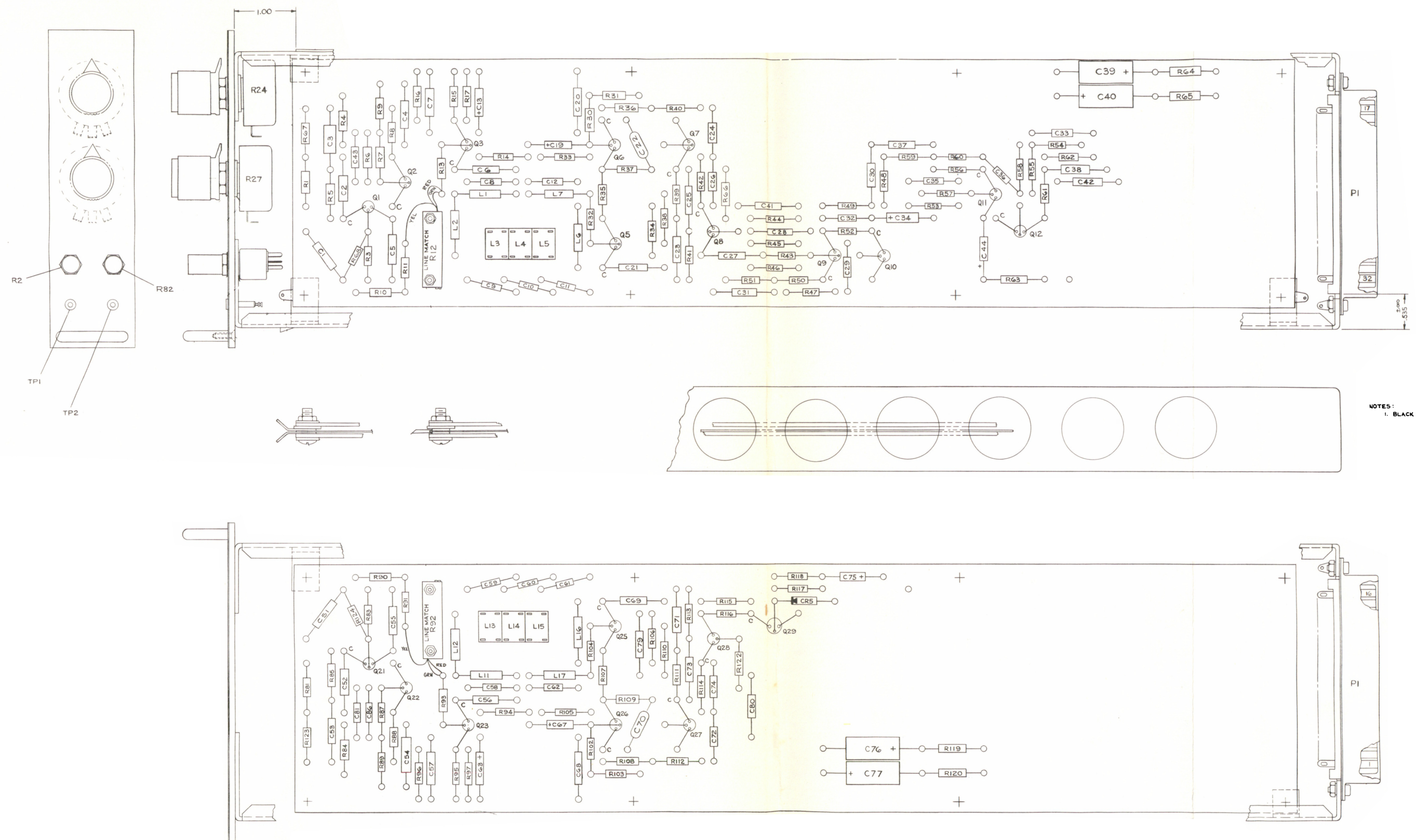


Figure 19—Playback Amplifier Schematic
(3318606)



H212/H213
MI-43255
3318622-1

FOR LIST OF PARTS SEE 3311369-501

Figure 20—Playback Amplifier Assembly
(3318622)

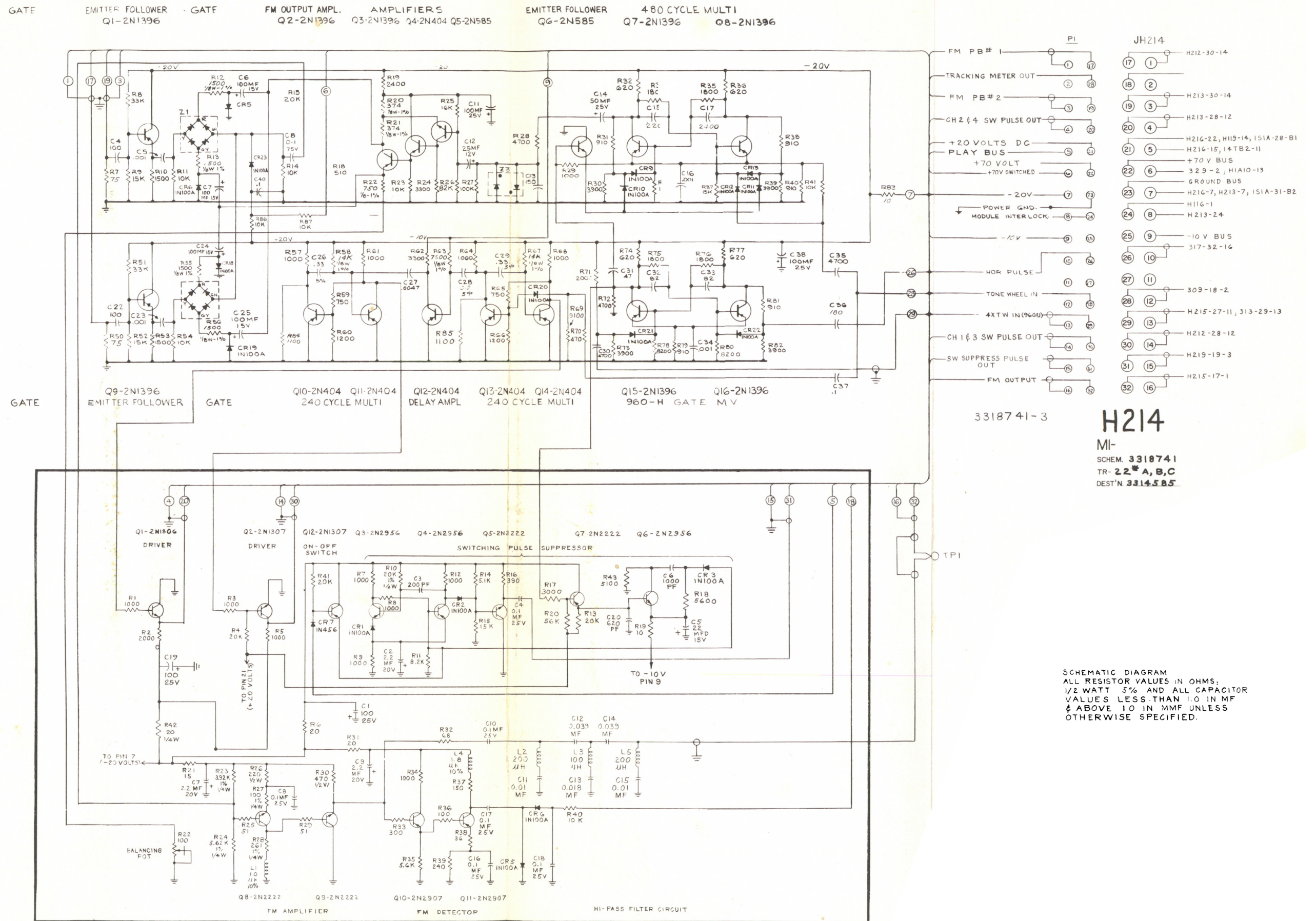


Figure 21—FM Switcher Schematic (TR-22A, B, C)
(3314585/3318741)

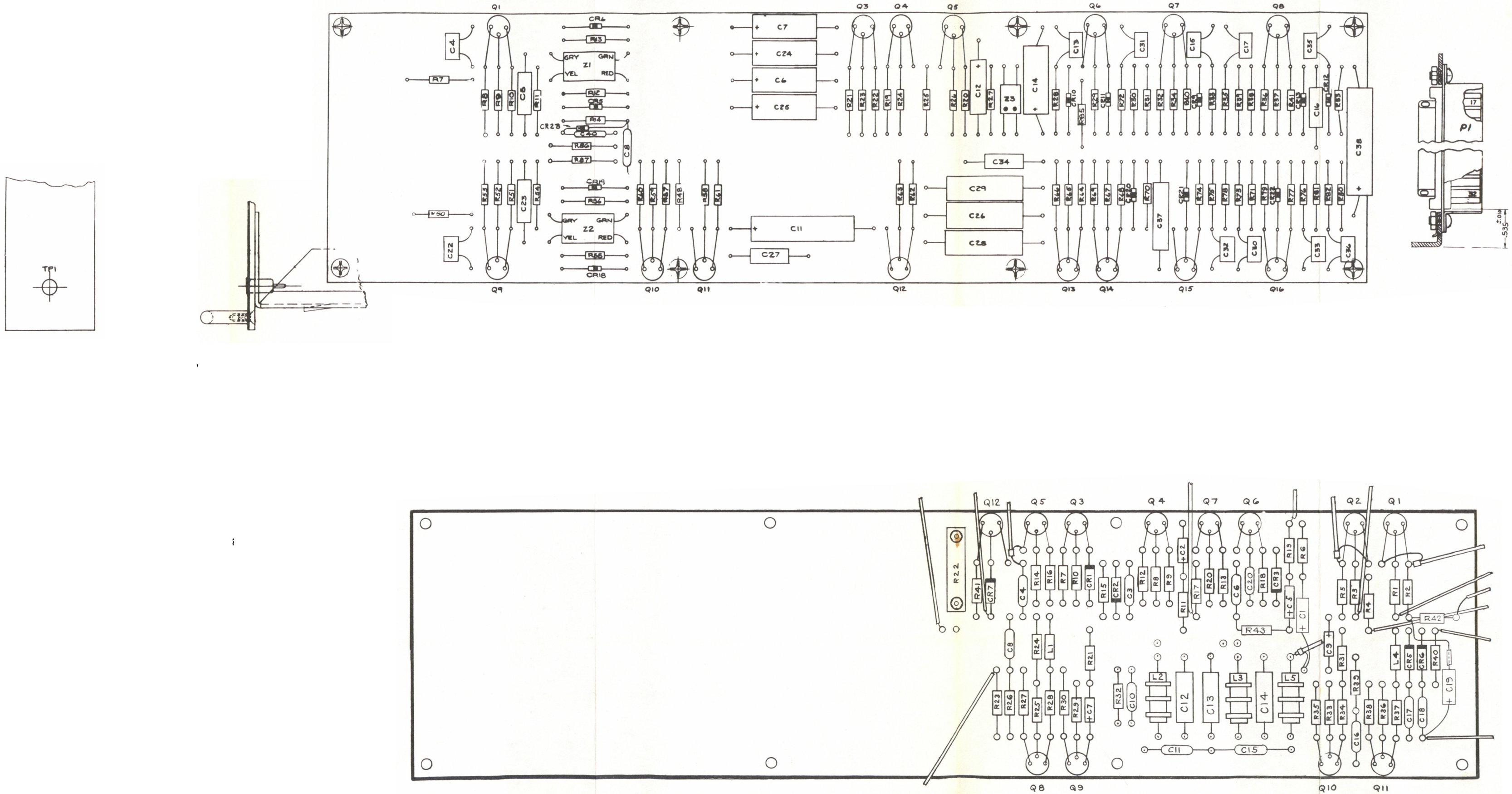


Figure 22—FM Switcher Assembly (TR-22A, B, C)
(3318747)

H214

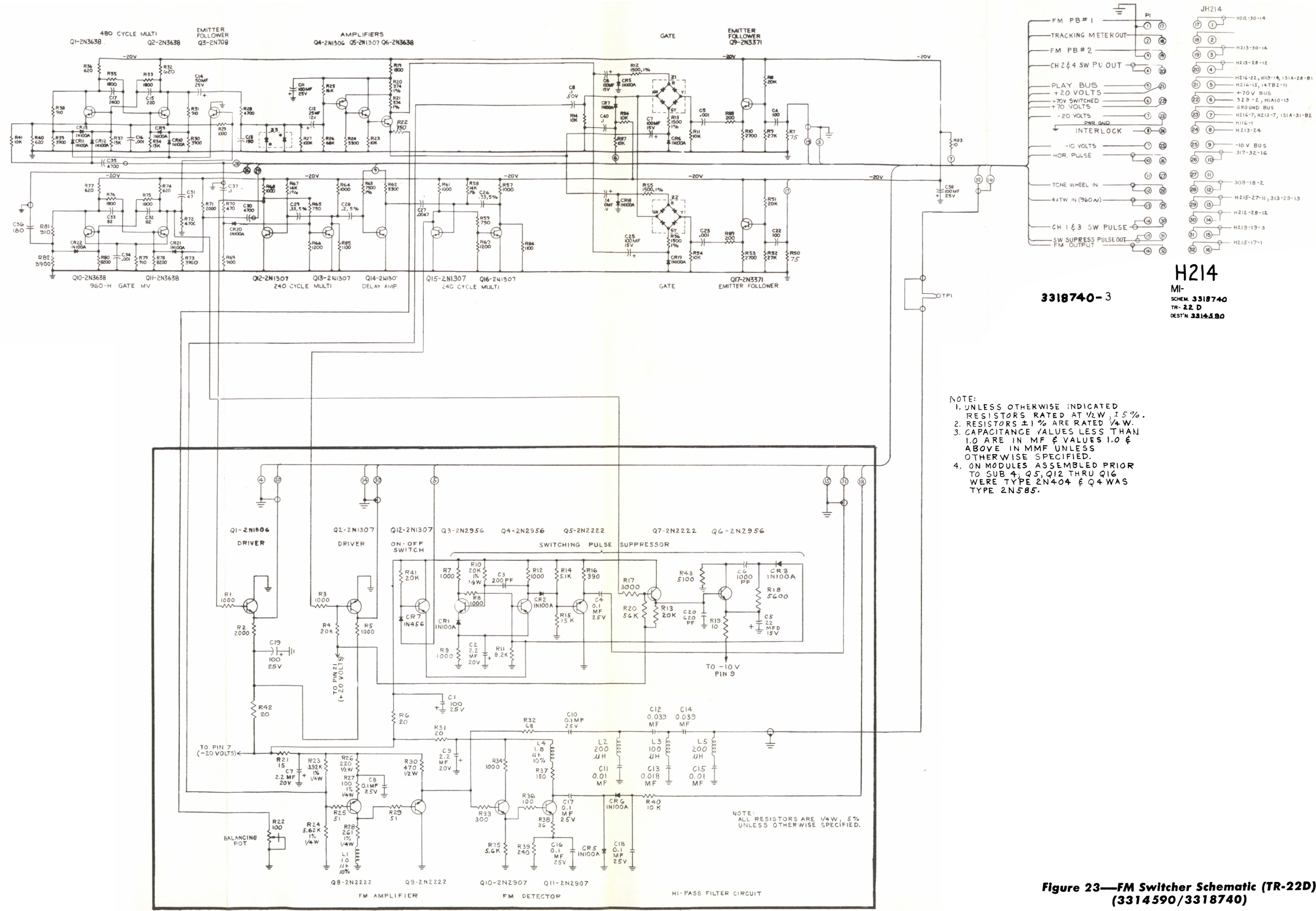
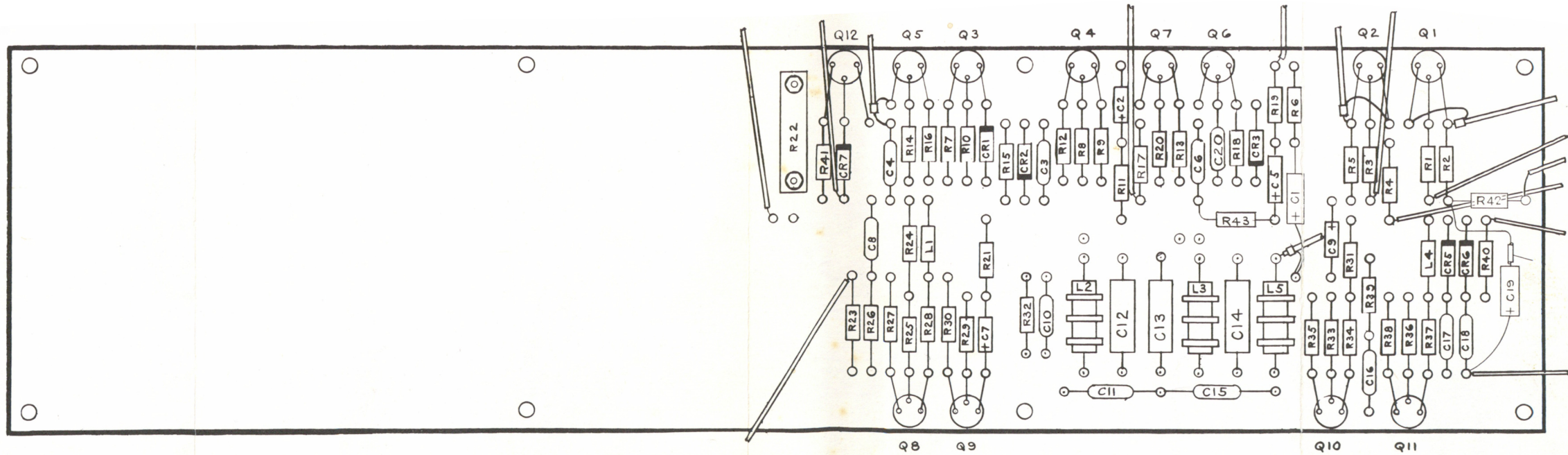
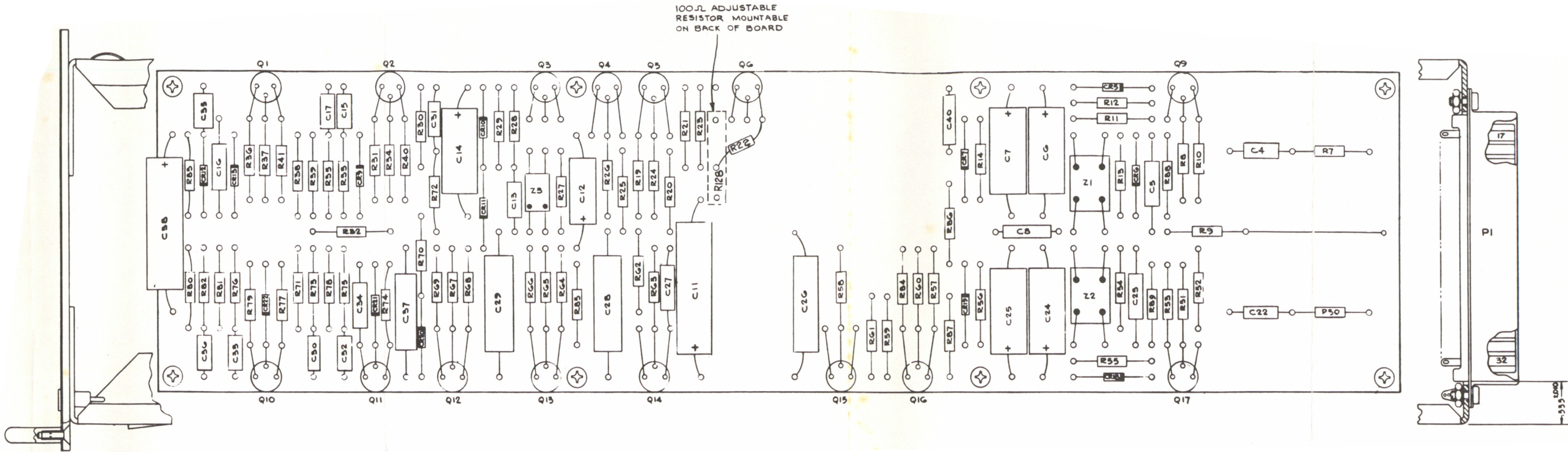


Figure 23—FM Switcher Schematic (TR-22D)
(3314590/3318740)



H214

Figure 24—FM Switcher Assembly (TR-22D)
(3318748)

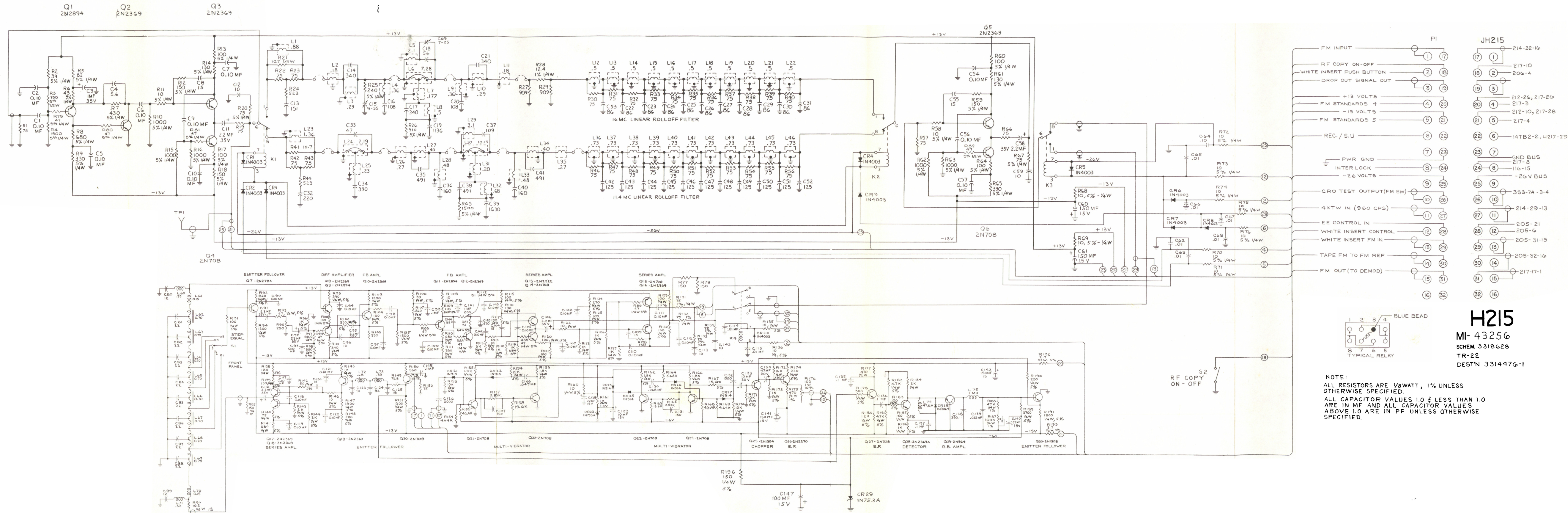
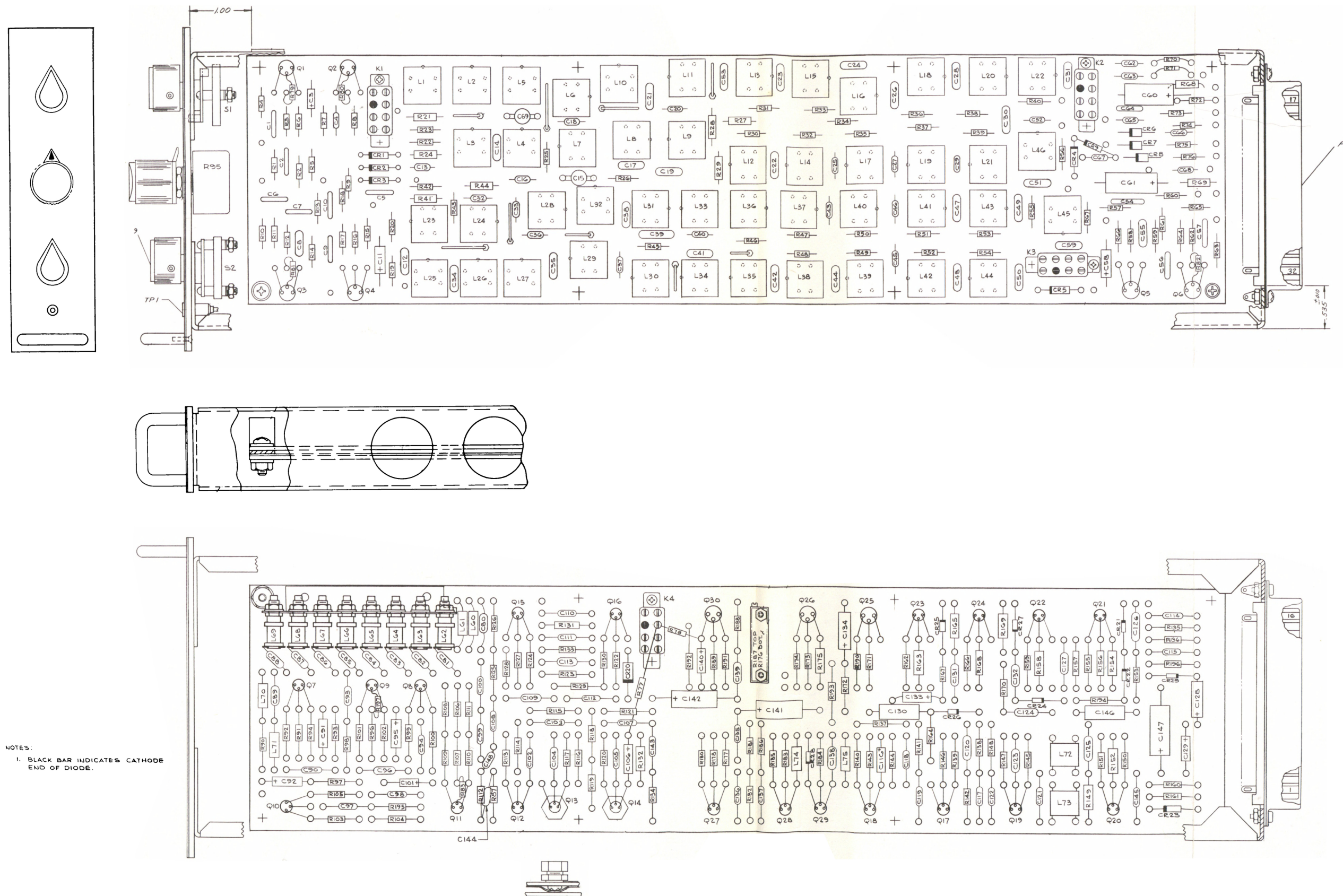
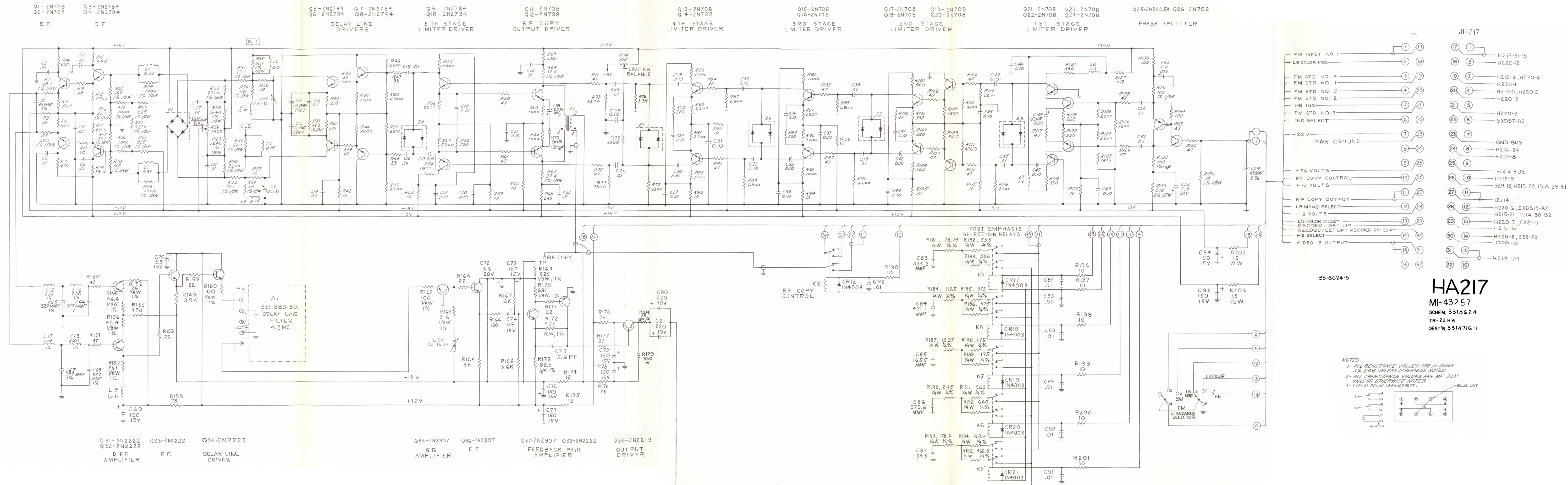


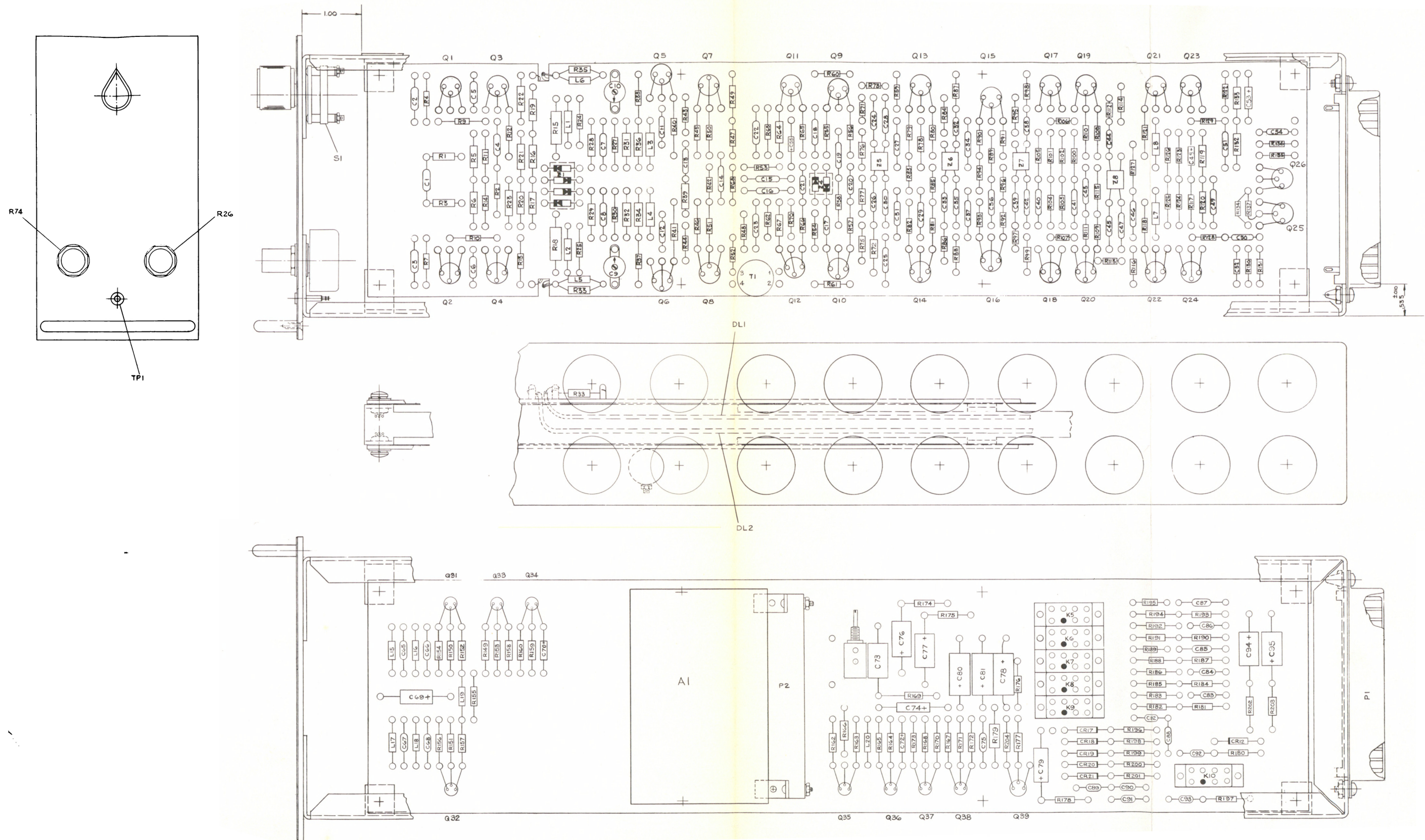
Figure 25—FM Equalizer Schematic
(3314476/3318628)



**Figure 26—FM Equalizer Assembly
(3318631)**



**Figure 27—Demodulator Schematic
(3314716/3318624)**



FOR LIST OF PARTS SEE 3311452-501

H217
MI-43257
3318642-2

Figure 28—Demodulator Assembly
(3318642)

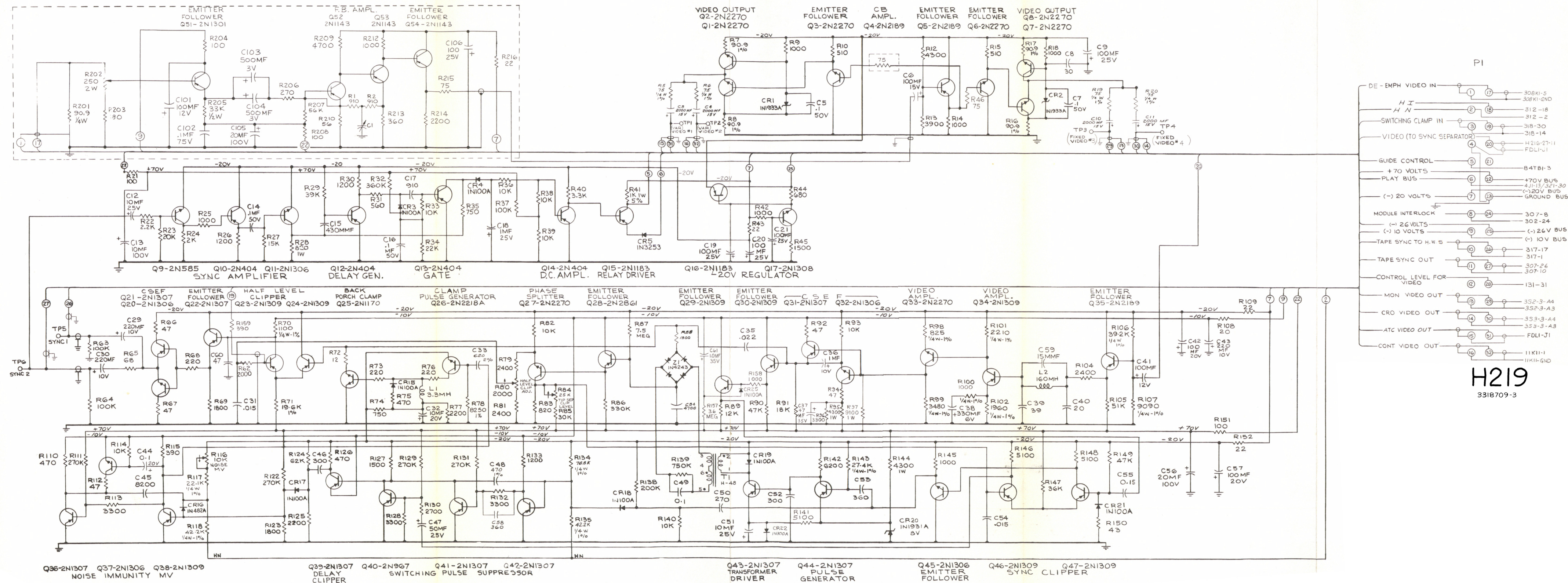


Figure 29—Demodulator Output Schematic
(3318709)



**Figure 30—Demodulator Output Assembly
(3318708)**

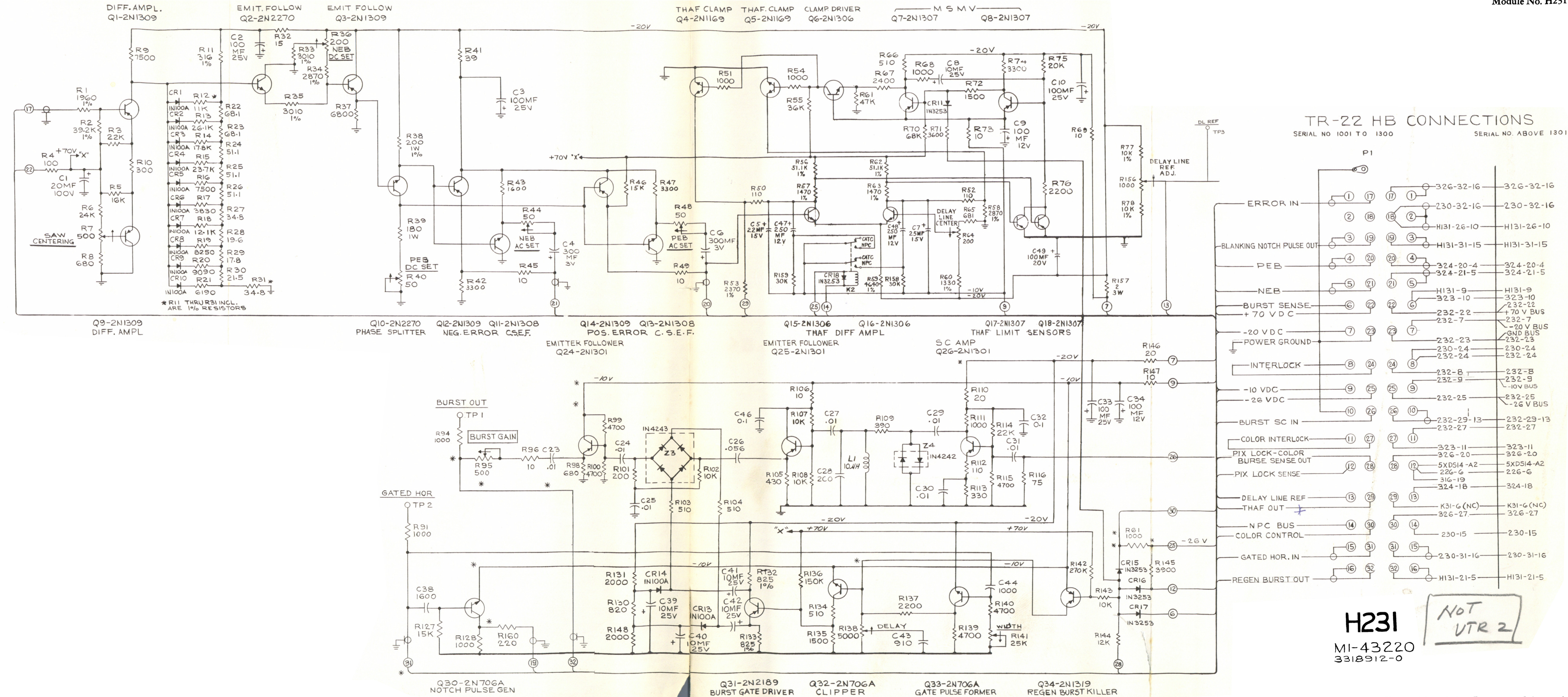
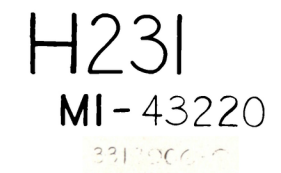


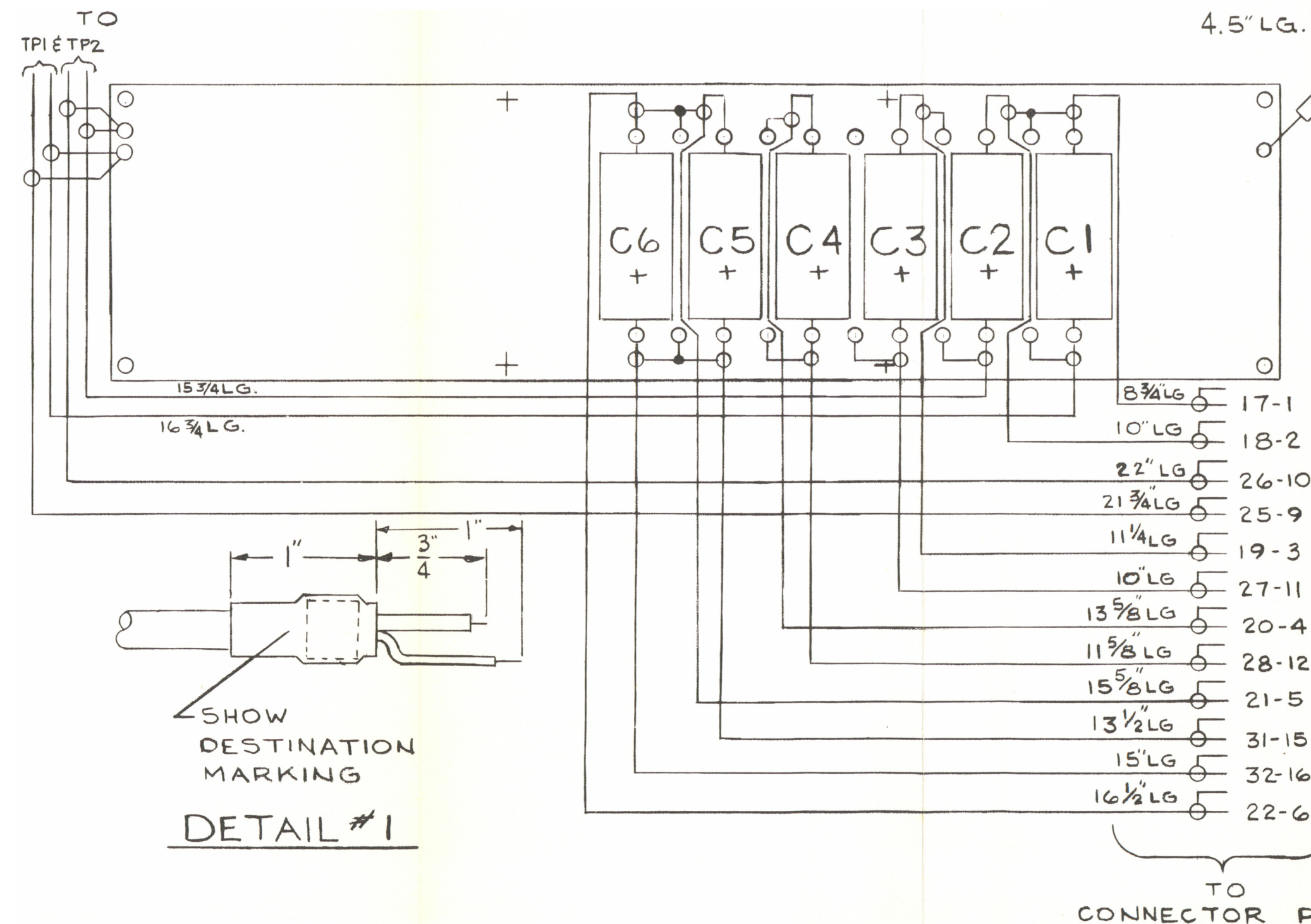
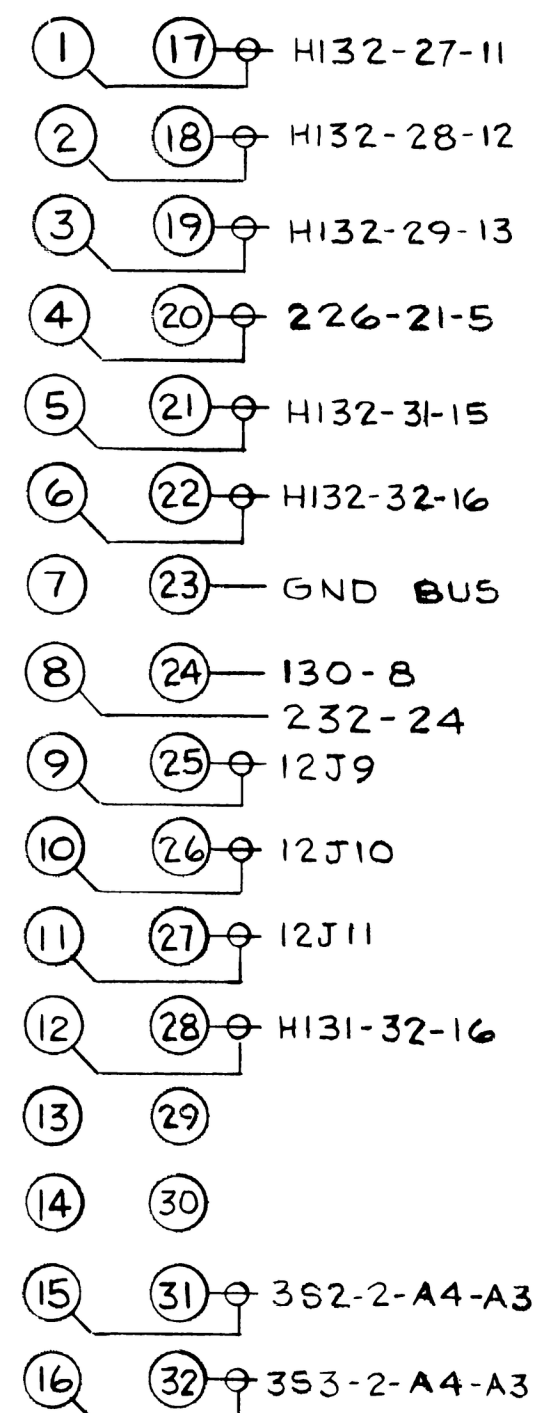
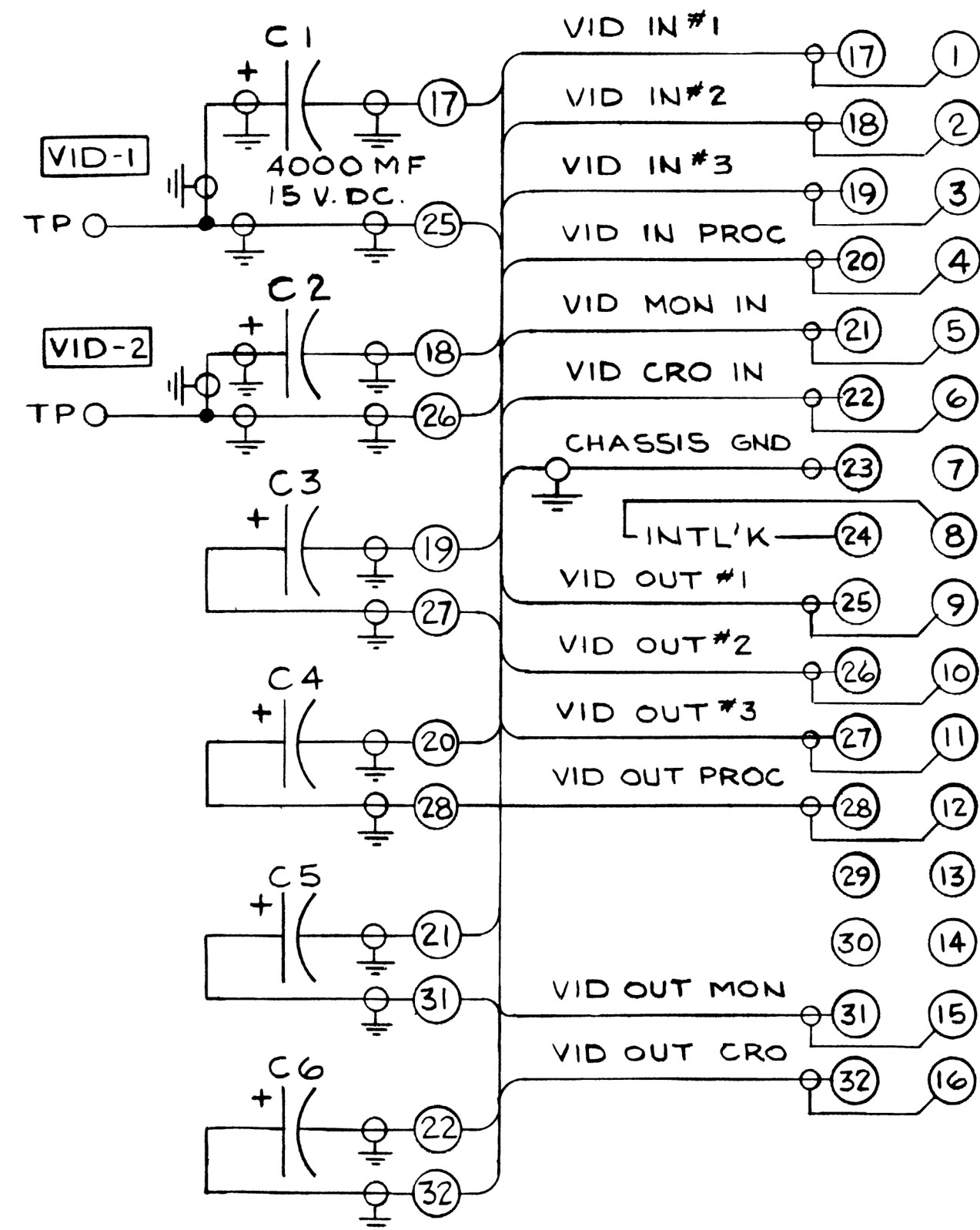
Figure 31—Color Processor Schematic
(3318912)



**Figure 32—Color Processor Assembly
(3318906)**

3311774

H233

Figure 33—Output Coupling
(3311774)

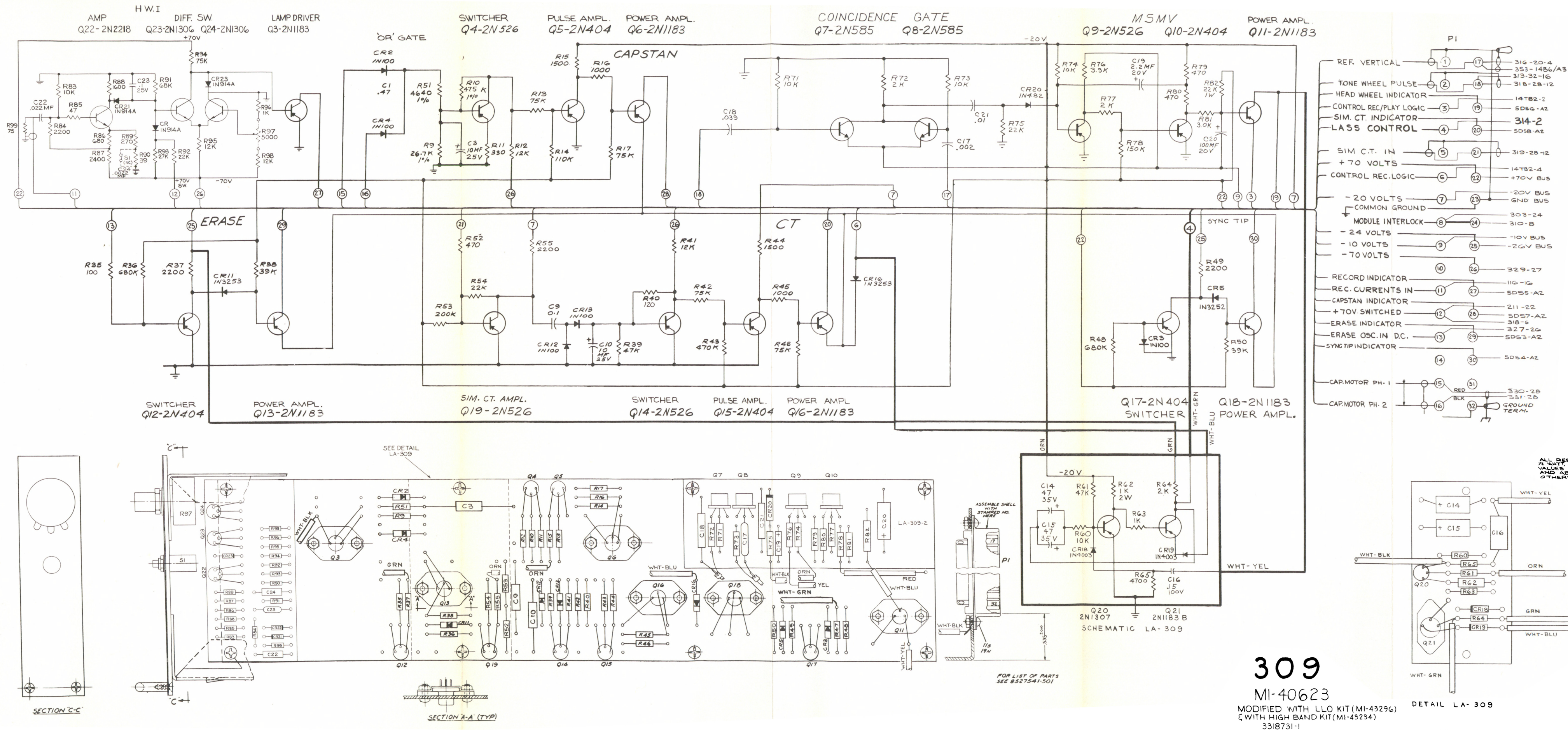
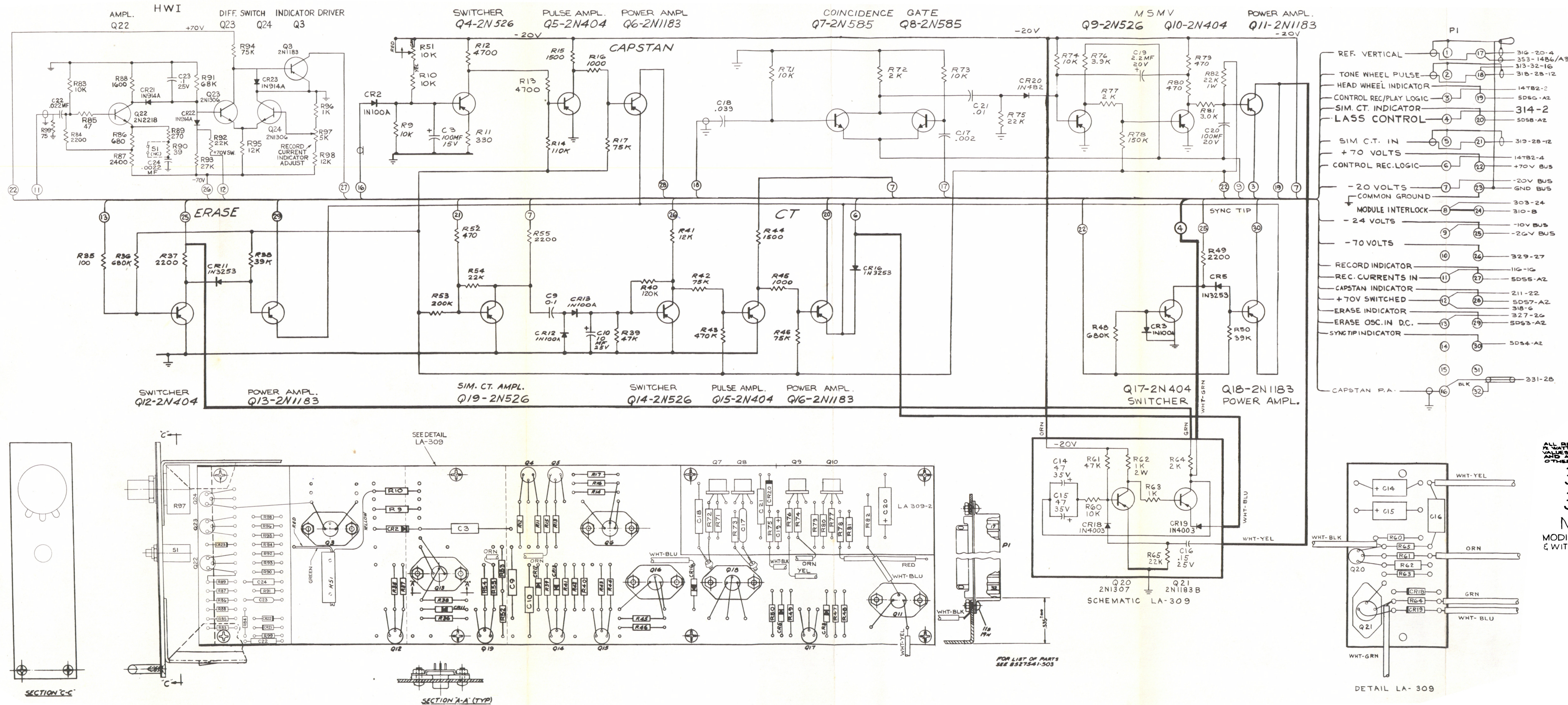
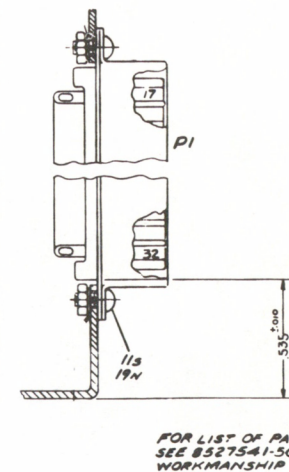
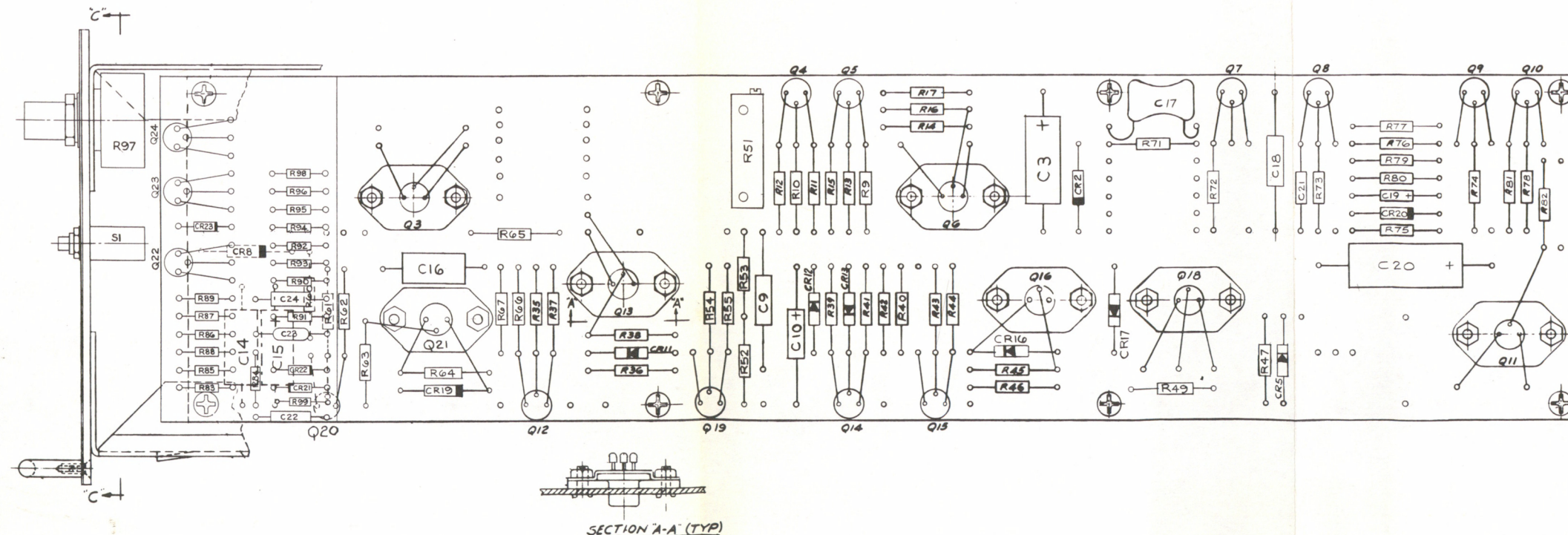
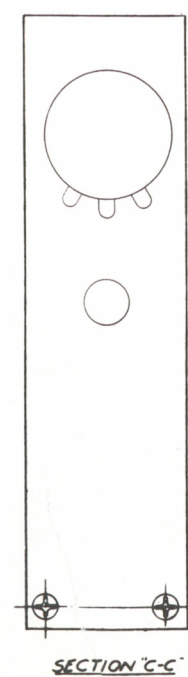
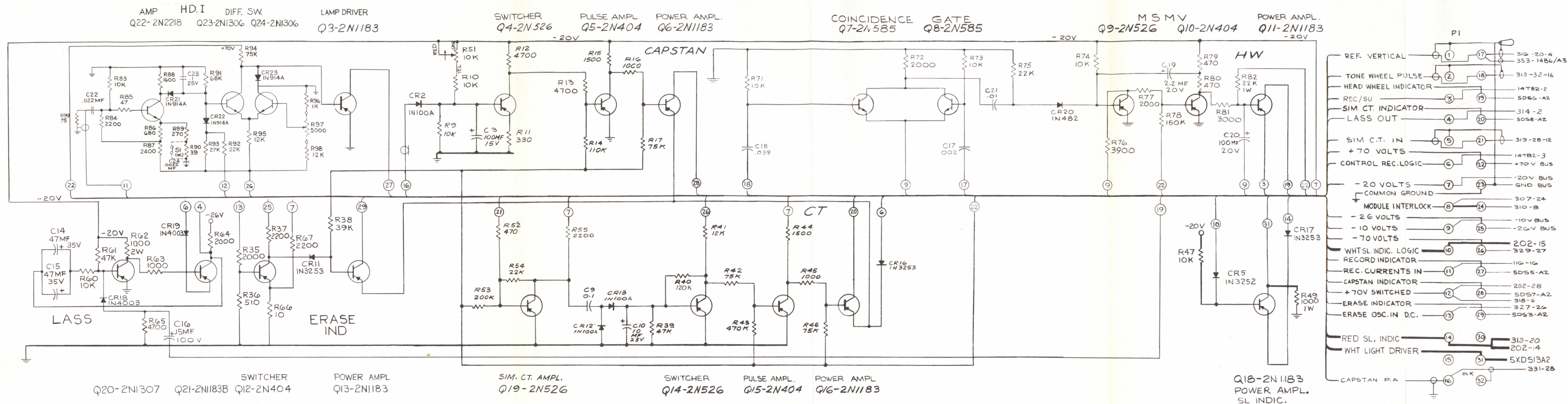


Figure 34—Indicator Serial Nos. 1001-1200 (309) (3318731)





FOR LIST OF PARTS
SEE 8527541-501
WORKMANSHIP

309C-S

MI-40623C-S

3318730-1

MODIFIED WITH HIGH BAND
KIT (MI-43234)

ALL RESISTOR VALUES IN OHMS,
RESISTOR 5% AND ALL CAPACITOR
VALUES LESS THAN 1.0 IN MF
AND ABOVE 1.0 IN MMF UNLESS
OTHERWISE SPECIFIED

Figure 36—Indicator Serial Nos. 1401 and Higher (309CS)
(3318730)

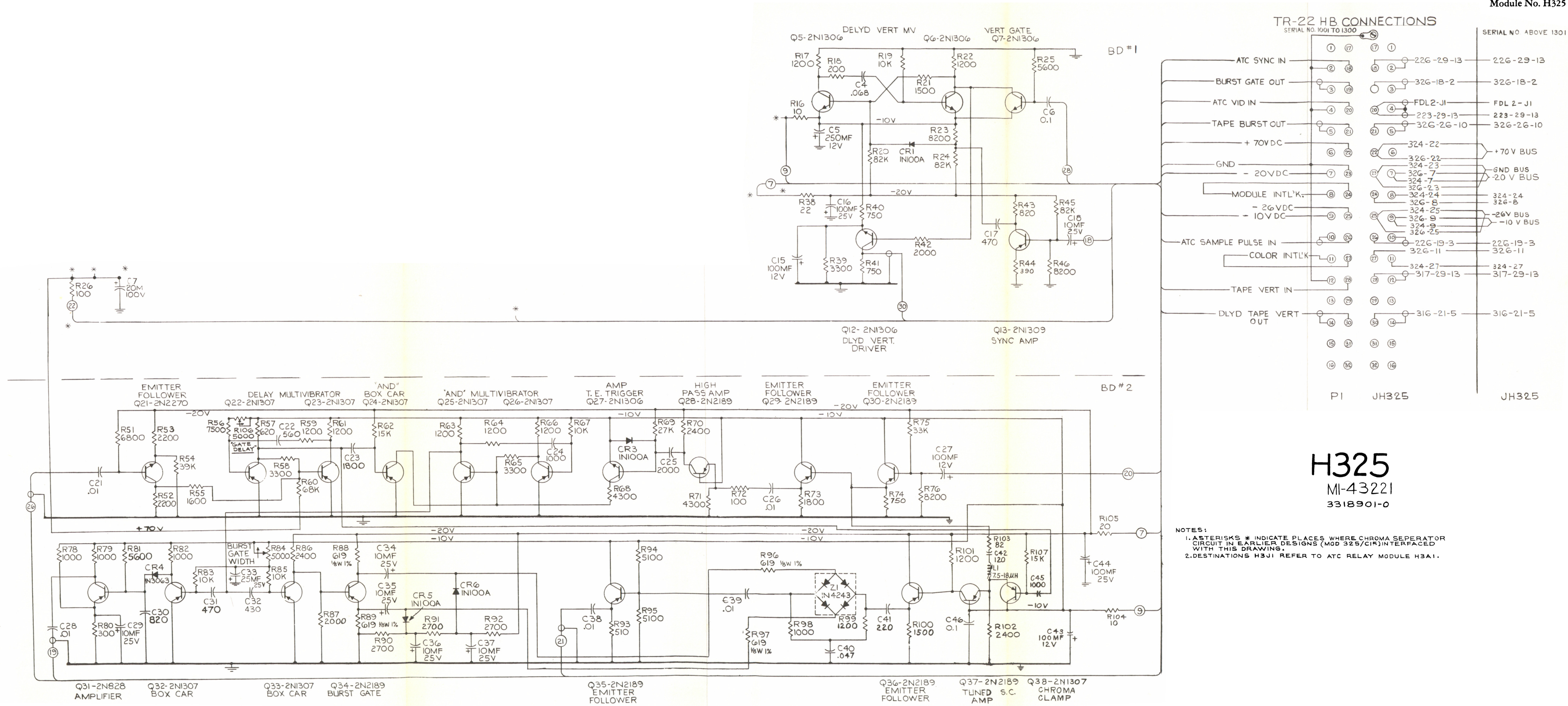
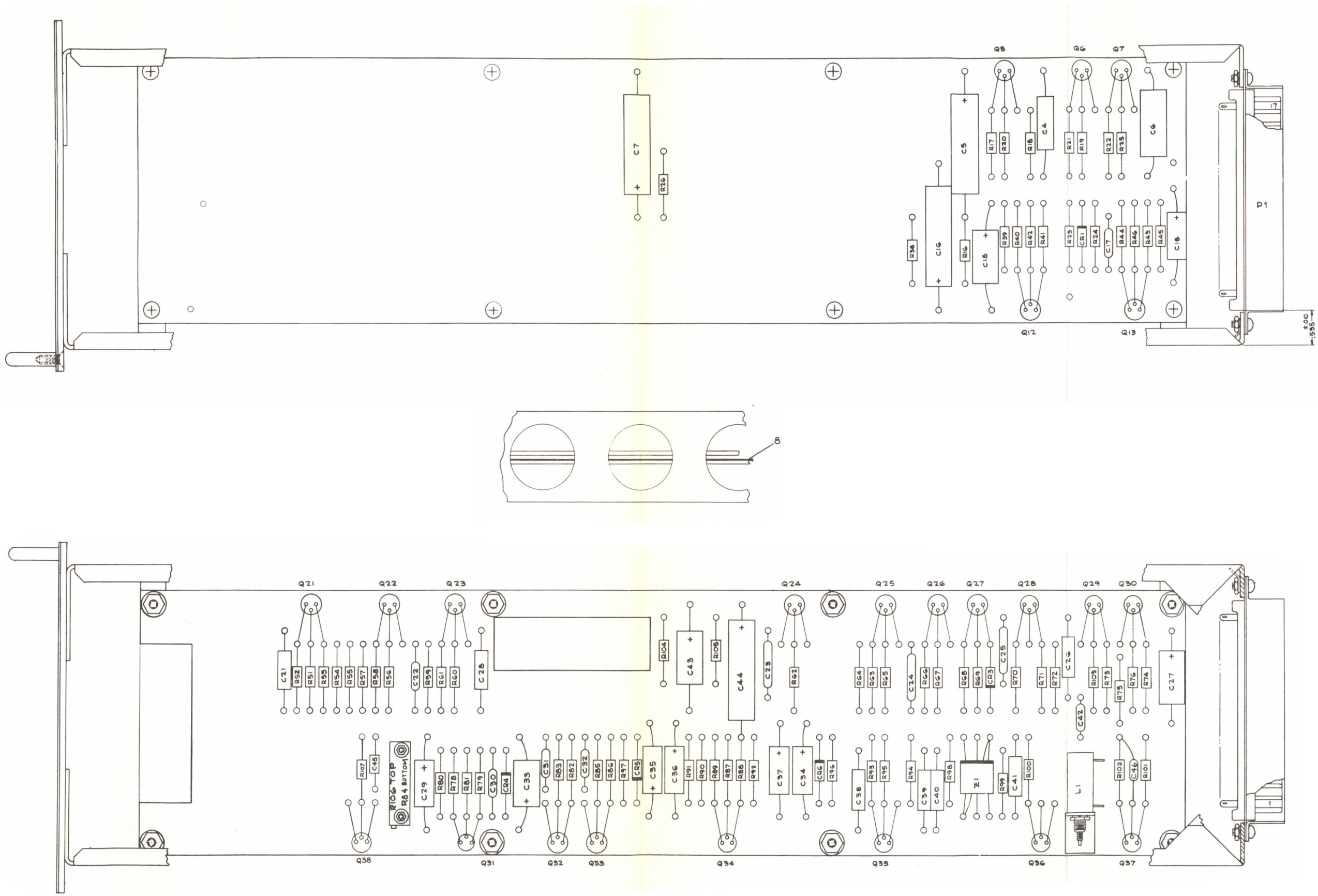


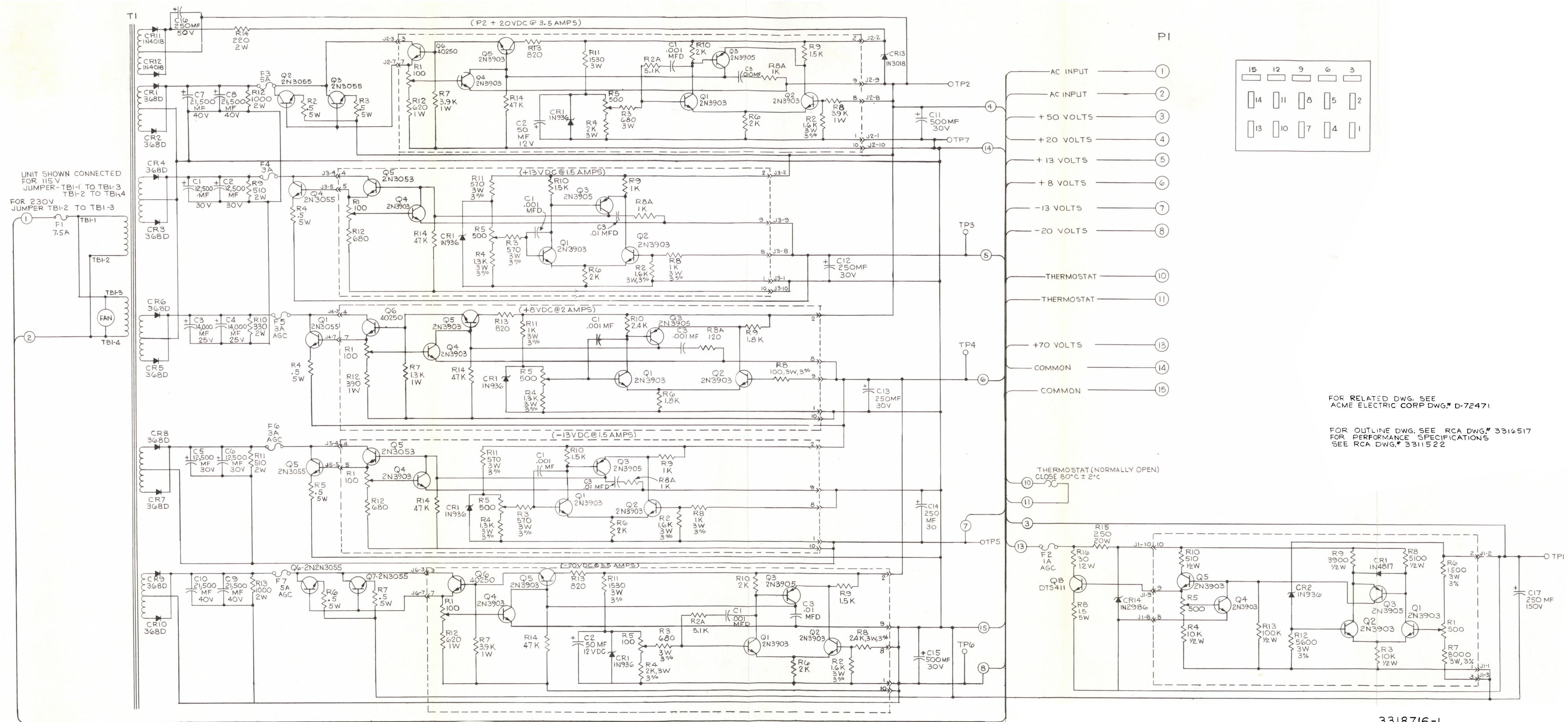
Figure 37—Chroma Separator Schematic (3318901)



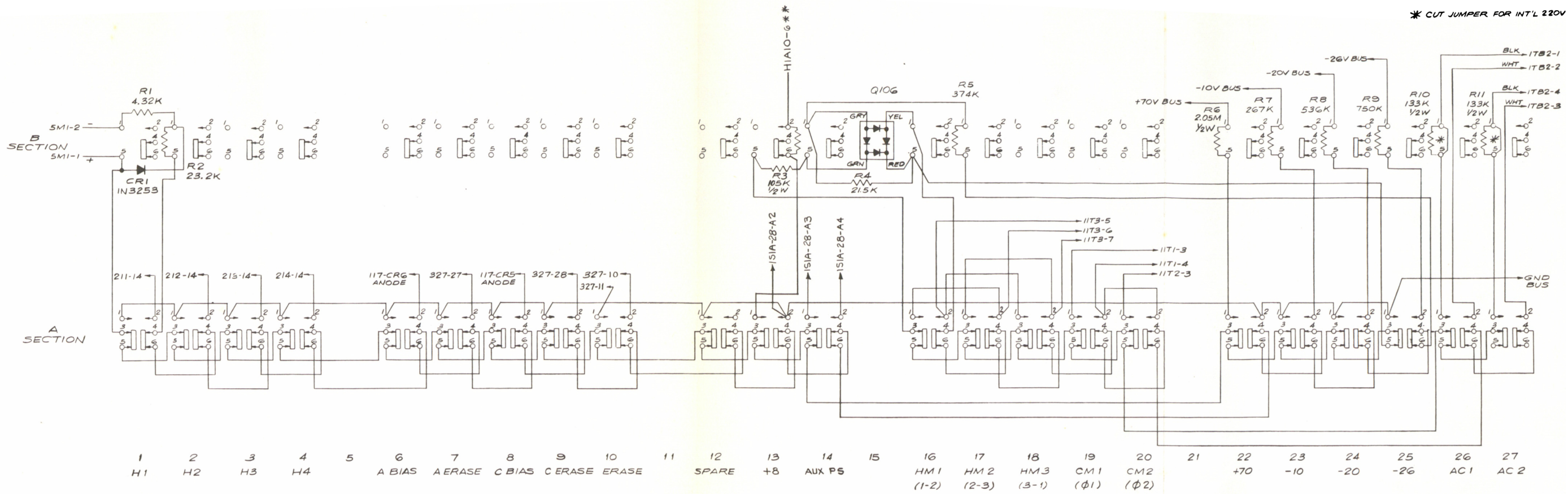
H325
MI-43221
3318900-O

FOR LIST OF PARTS SEE 8543738-502

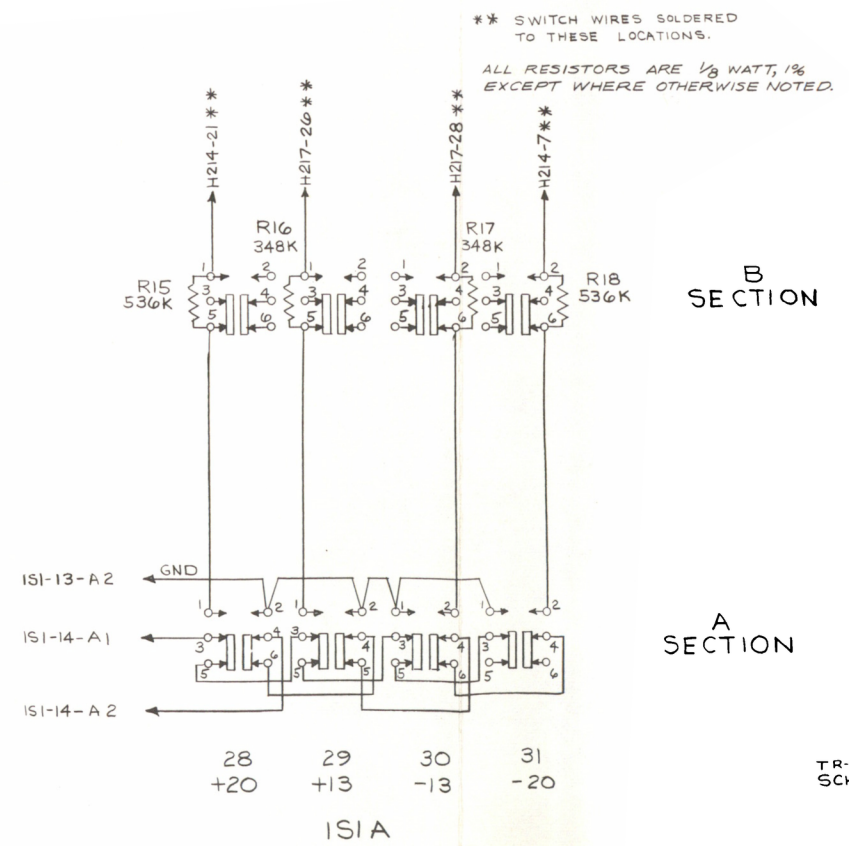
Figure 38—Chroma Separator Assembly
(3318900)



* CUT JUMPER FOR INT'L 220V



ISI-SWITCHER-METER



3318705-O

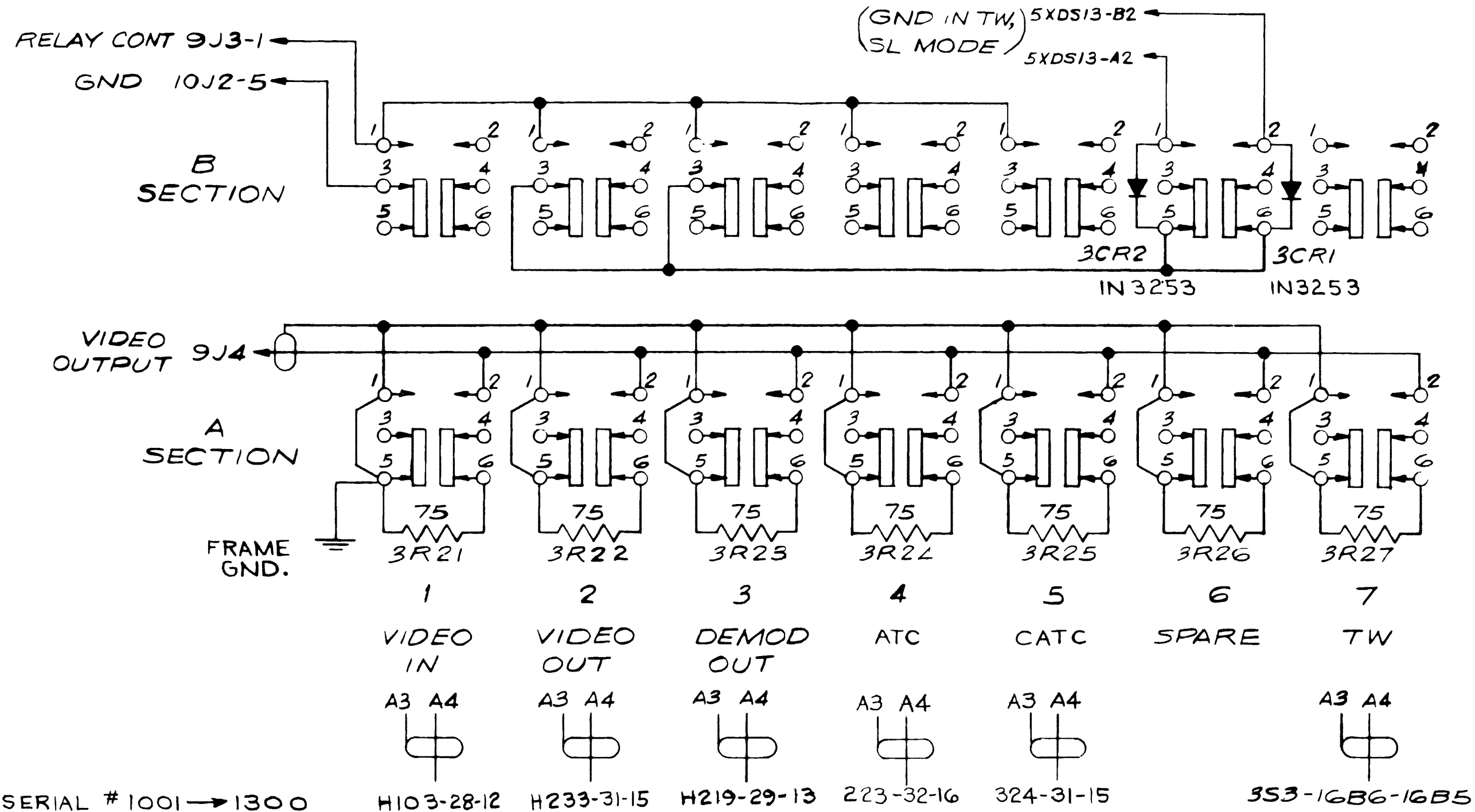
ISI

TR-22 SERIAL 1001-1100
SCHEMATIC REF 8323482

Figure 40—Meter Switcher Serial Nos. 1001-1100
(3318705)

[illegible]

3S2-PICTURE MONITOR SWITCHER



TR-22 SERIAL #1001 → 1300
WITH ATC & CATC ADDED

REF. SCHEMATIC 8480791

3312836

3S2

Figure 42—Picture Monitor Switcher Serial Nos. 1001-1300
(3312836)

352-PICTURE MONITOR SWITCHER

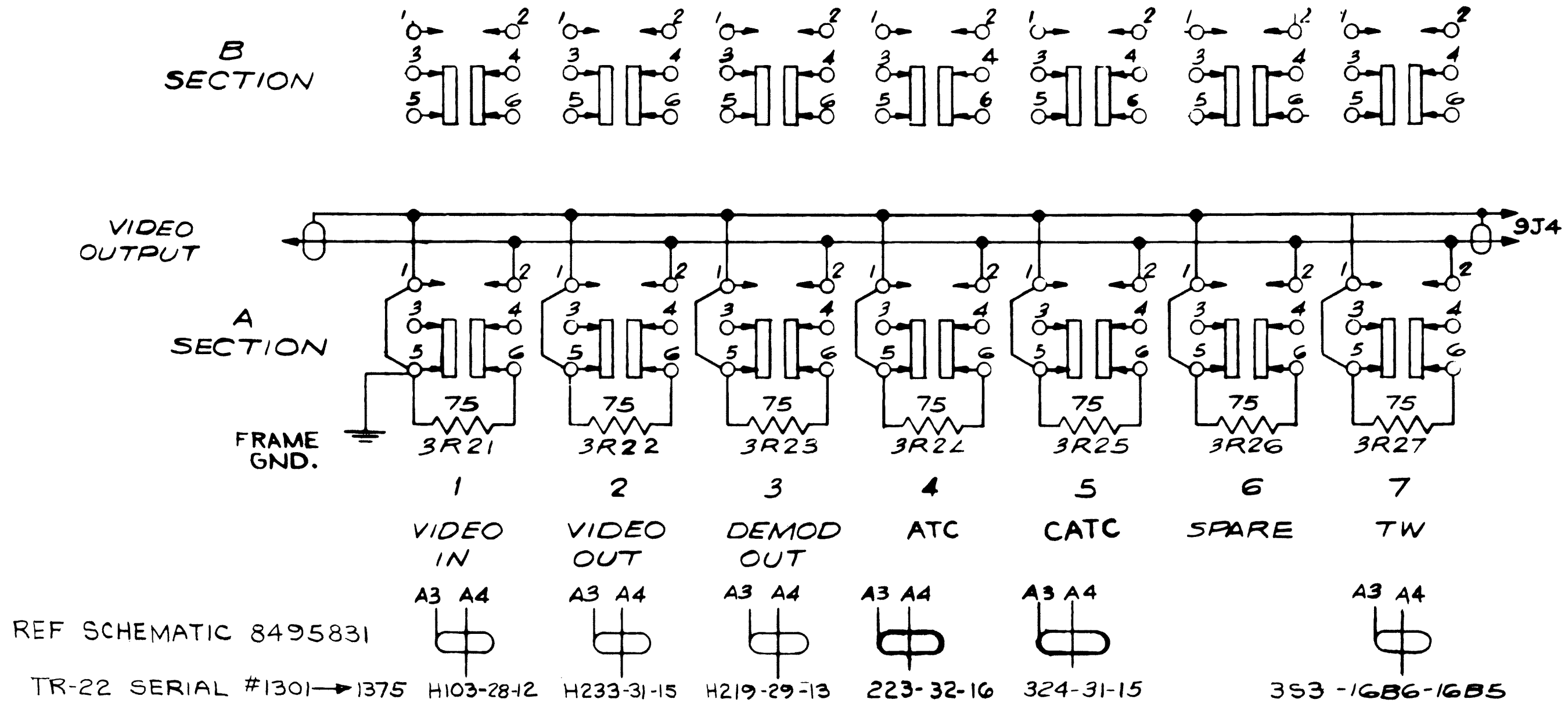
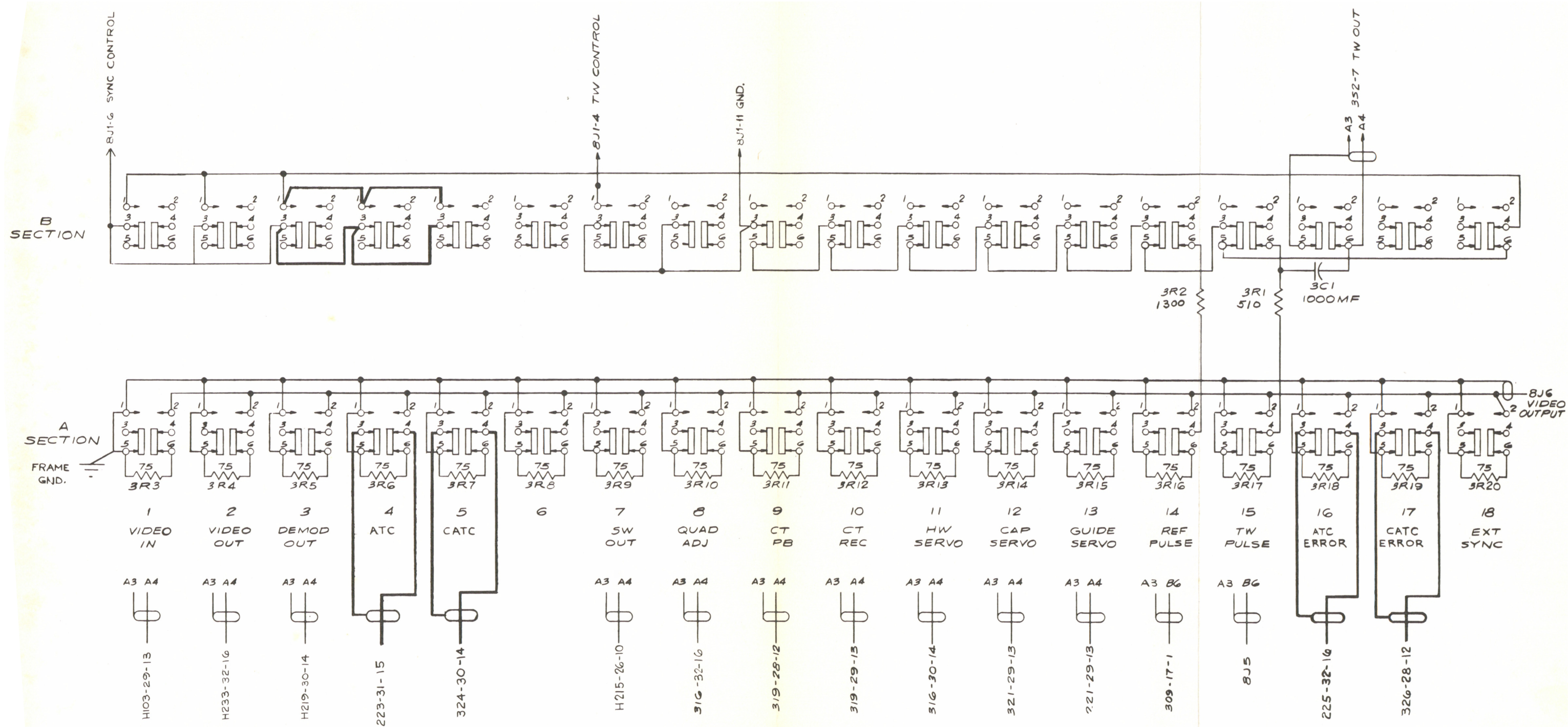


Figure 43—Picture Monitor Switcher Serial Nos. 1301 and Higher (3312837)



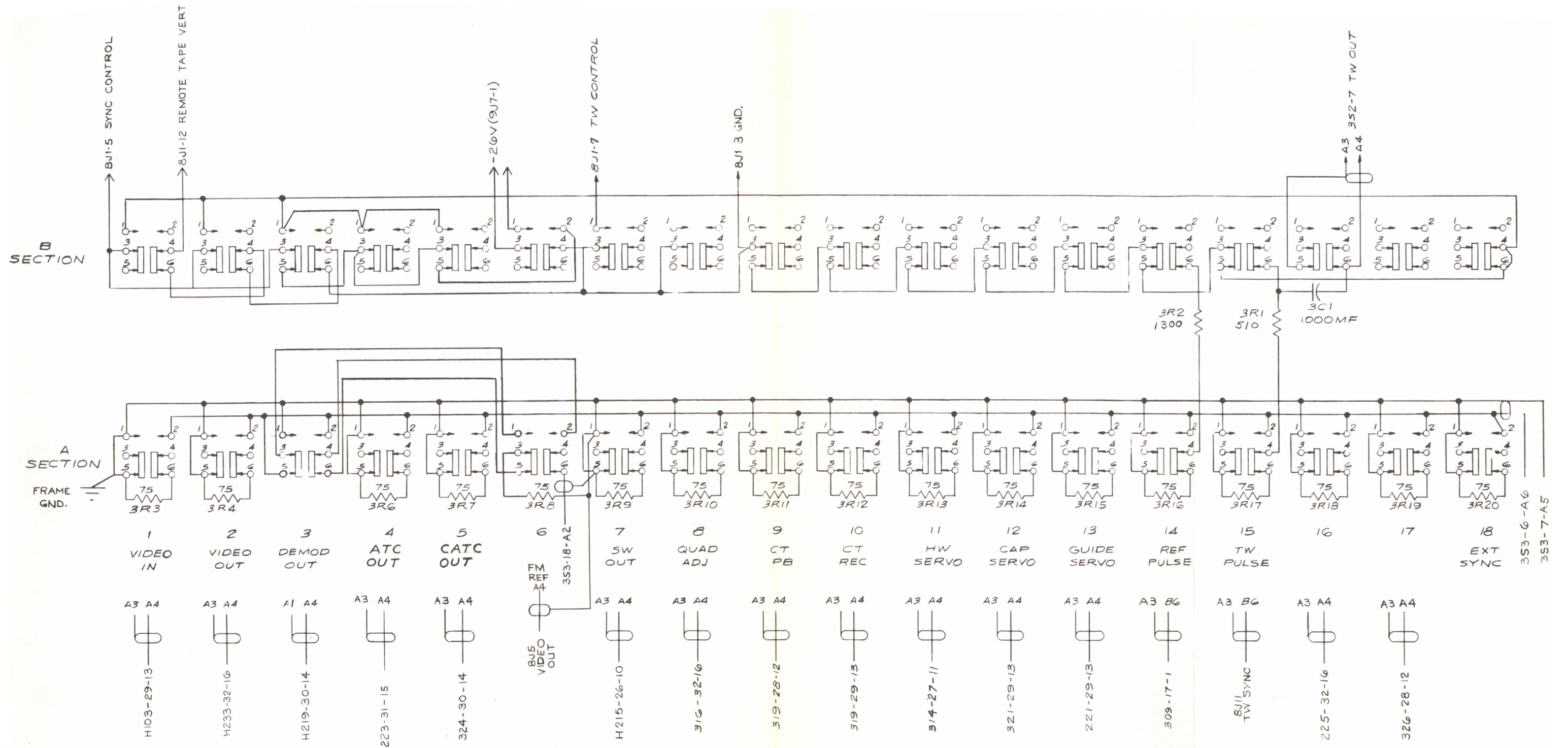
3S3-CRO SWITCHER

3316552-1 3S3

NOTE

ATC MODIFICATIONS ARE SHOWN IN HEAVIER LINES
 REF SCHEMATIC 8646704
 TR-22 SERIAL #1001 → 1300

**Figure 44—CRO Switcher Serial Nos. 1001-1300
 (3316552)**

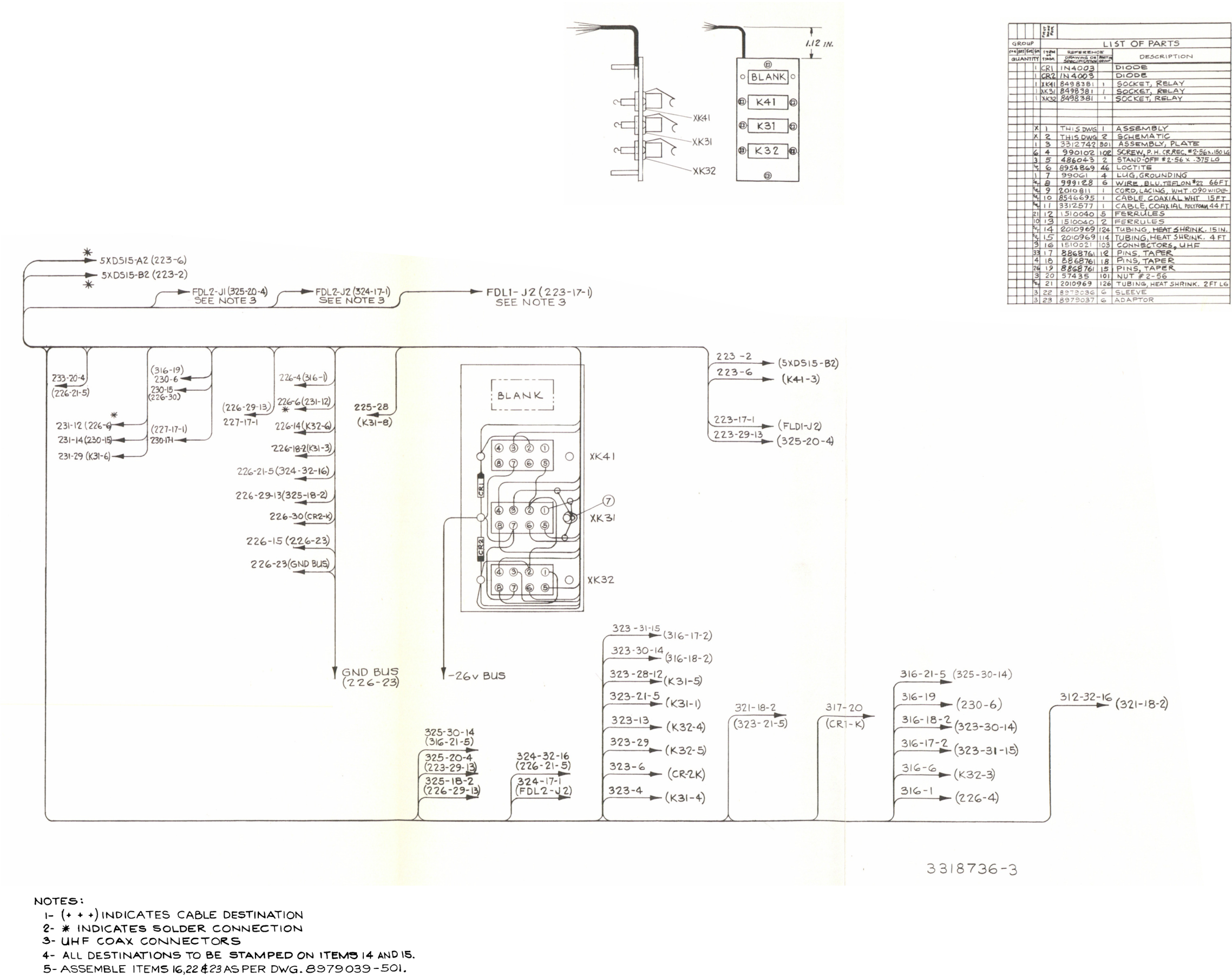


353-CRO SWITCHER

REF SCHEMATIC 3316180
TR-22 SERIAL # 1301 → 1375

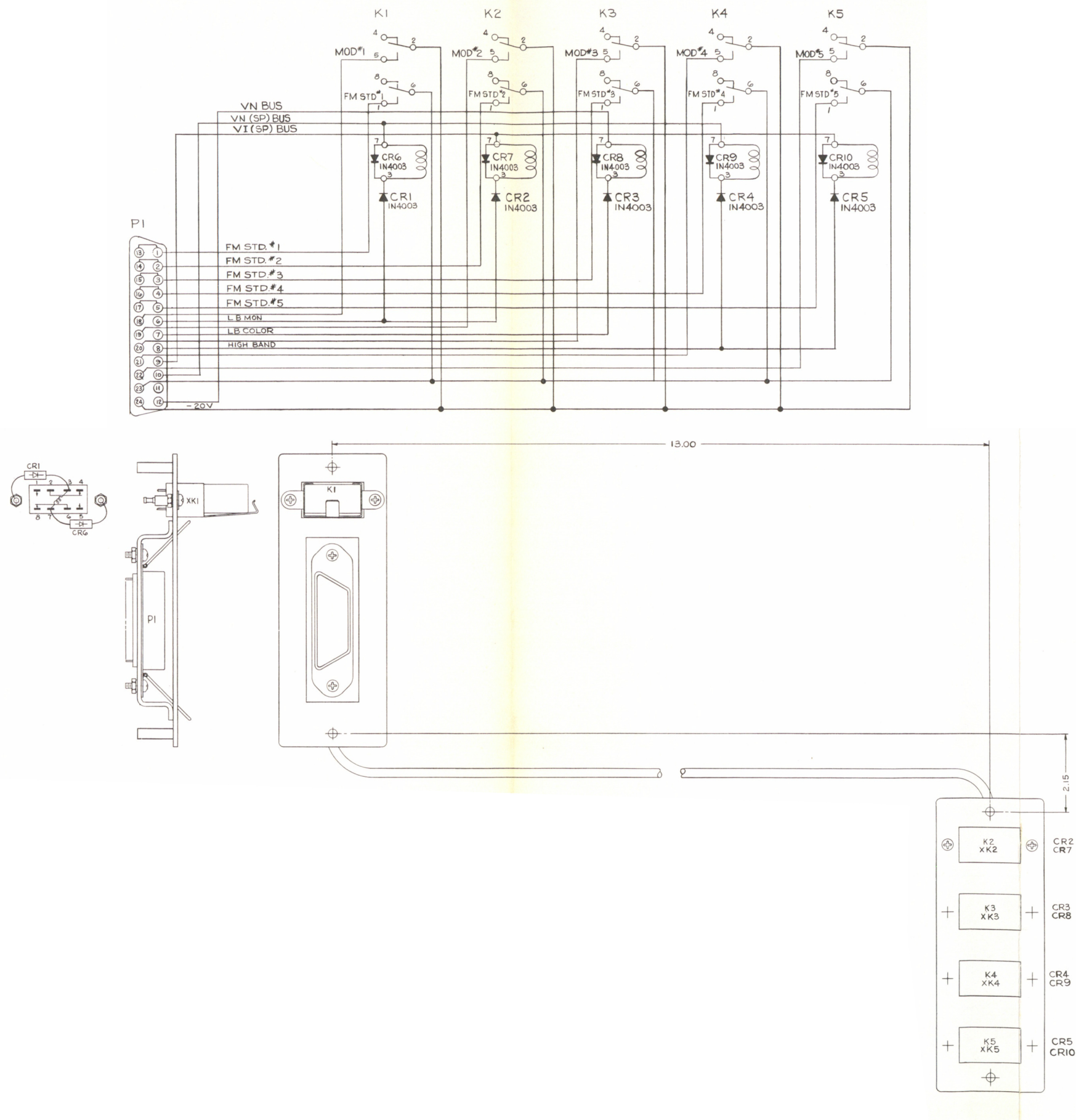
3316553-1 3S3

Figure 45—CRO Switcher Serial Nos. 1301 and Higher (3316553)



3318736-3

Figure 47—ATC Relay Harness Wiring (3318736)

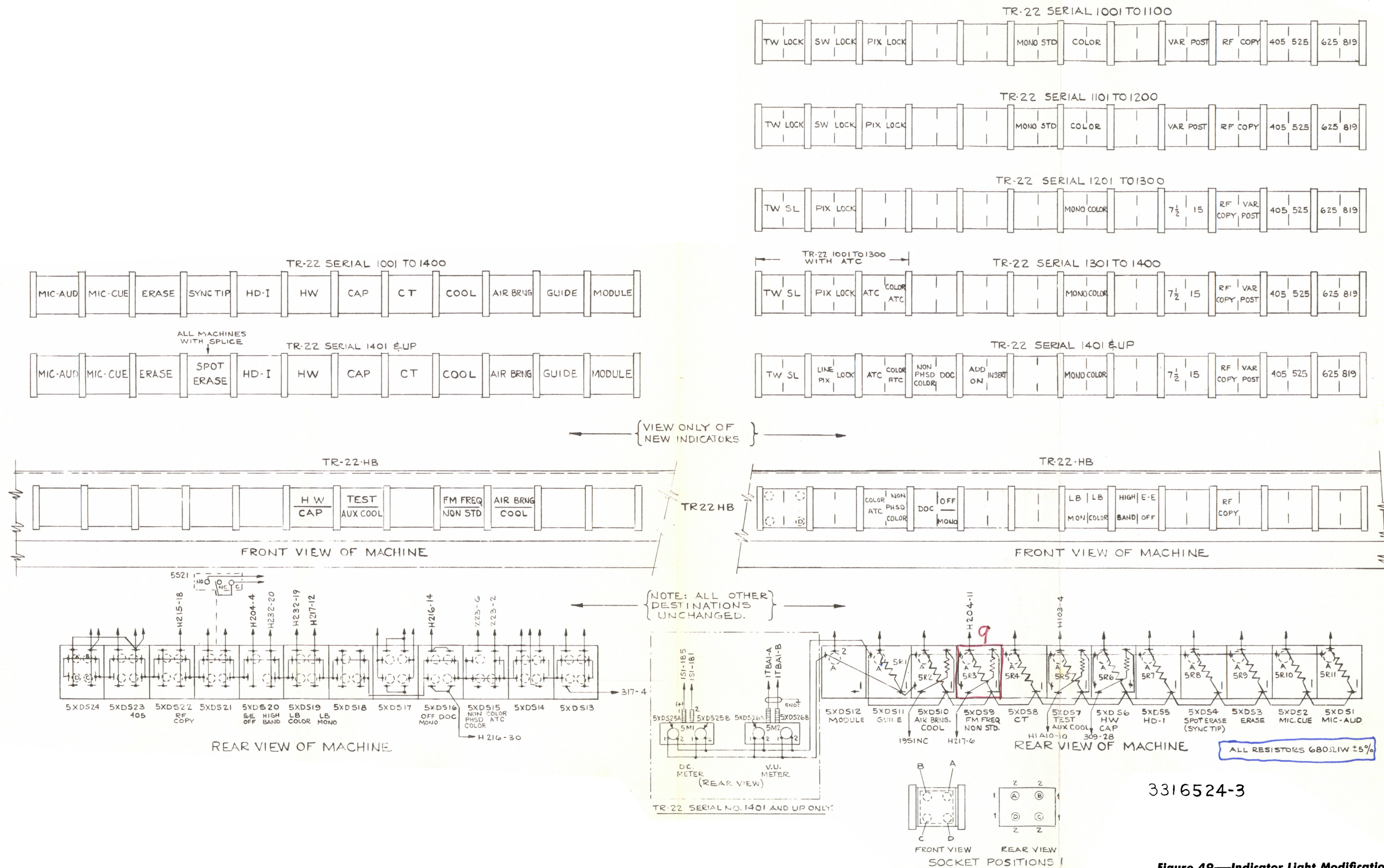


LIST OF PARTS			
GROUP NO.	ITEM NO.	REFERENCE	DESCRIPTION
QUANTITY	ITEM NO.	REFERENCE	DESCRIPTION
1	CR1	IN4003	DIODE
1	CR2		
1	CR3		
1	CR4		
1	CR5		
1	CR6		
1	CR7		
1	CR8		
1	CR9		
1	CR10	IN4003	DIODE
1	K1	8526088	4 RELAY
1	K2	8526088	4 RELAY
1	K3	8526088	4 RELAY
1	K4	8526088	4 RELAY
1	K5	8526088	4 RELAY
1	PI	3312725	2 CONNECTOR (FEMALE)
1	XK1	8498381	1 SOCKET, RELAY
1	XK2	8498381	1 SOCKET, RELAY
1	XK3	8498381	1 SOCKET, RELAY
1	XK4	8498381	1 SOCKET, RELAY
1	XK5	8498381	1 SOCKET, RELAY
X	I		ASSEMBLY
X	2	THIS DWG	2 SCHEMATIC
1	3	3312742	501 PLATE ASSEMBLY
1	4	3312744	501 PLATE ASSEMBLY
10	5	990102	102 SCREW PAN HD. C.R. #2-56X.150 LG.
2	6	990102	107 SCREW PAN HD. C.R. #2-56X.312 LG.
4	7	93618	103 LOCKWASHER #2
2	8	57435	101 NUT #2-56
10	9	486043	2 STANDOFF #2-56 X .375 LG.
10	10	8954869	46 LOCTITE
11	11	999128	9 WIRE WHT
12	12	200812	832 SLEEVING (BLK. -.034 I.D.)
13	13	990102	117 SCREW PAN HD. C.R. #2-56X.750 LG.
14	14	200811	1 CORD LACING (WHT. -.090 W)
15	15	999127	9 WIRE WHT
16	16	999127	91 WIRE BRN
17	17	999127	92 WIRE RED
18	18	999127	93 WIRE ORN
19	19	999127	94 WIRE YEL
20	20	999127	95 WIRE GRN
21	21	999127	96 WIRE BLUE
22	22	999127	97 WIRE VIO
23	23	999127	98 WIRE GRAY
24	24	999127	99 WIRE RED/BLK
25	25	999127	100 WIRE RED/BLUE
26	26	999127	101 WIRE RED/YEL
27	27	999127	102 WIRE BLUE/BRN
28	28	999127	103 WIRE BLUE/ORN
29	29	999127	104 WIRE BRN/BLK
30	30	999127	105 WIRE WHT/ORN/GRN
31	31		

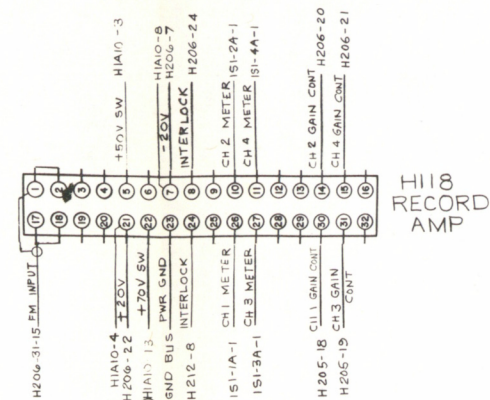
H220

NOTES:
1. REF. DWG. 3318904 (3318913) (BLOCK DIAGRAM)
2. REF. CONNECTION DIAGRAM 3318682

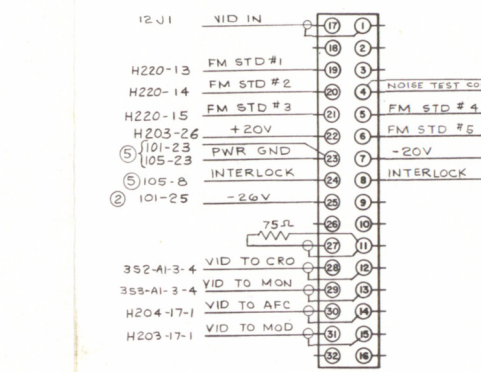
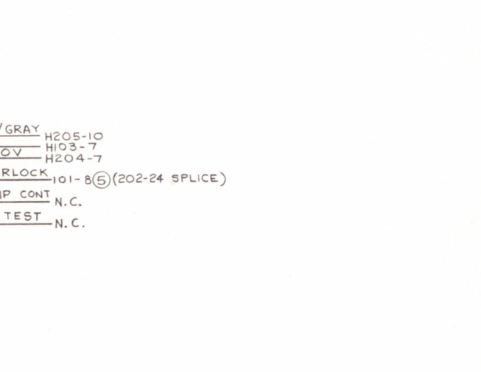
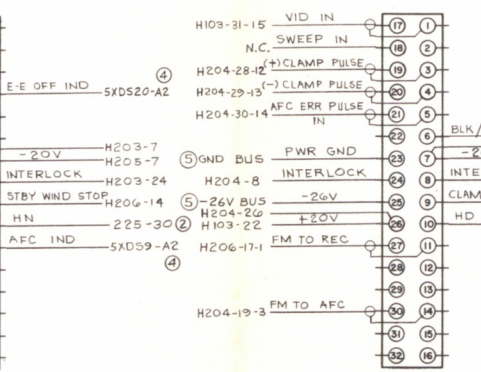
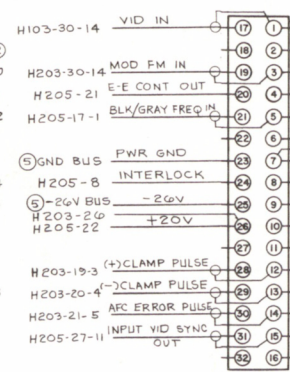
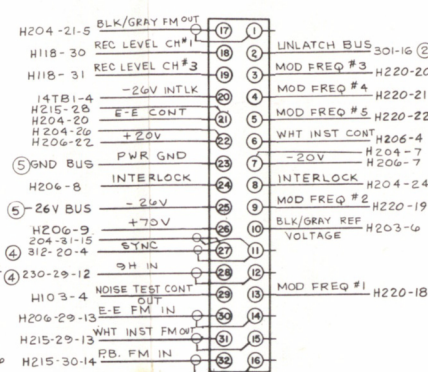
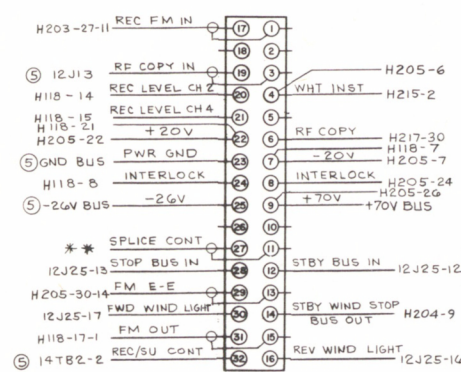
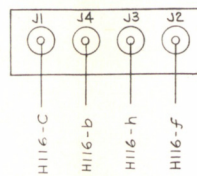
Figure 48—Standards Generator (3318663)



**Figure 49—Indicator Light Modification
(3316524)**

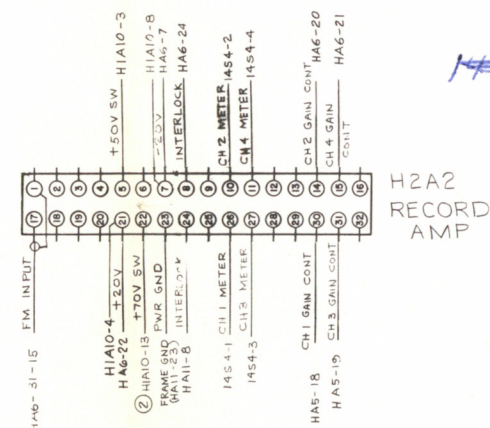


FRONT PANEL

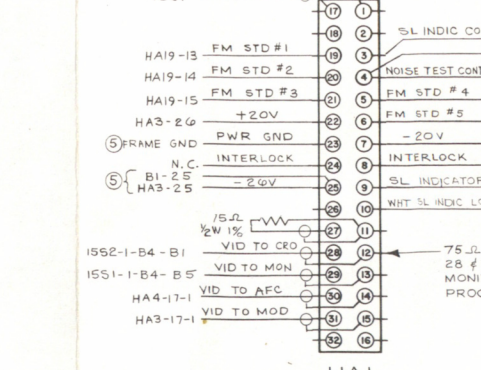
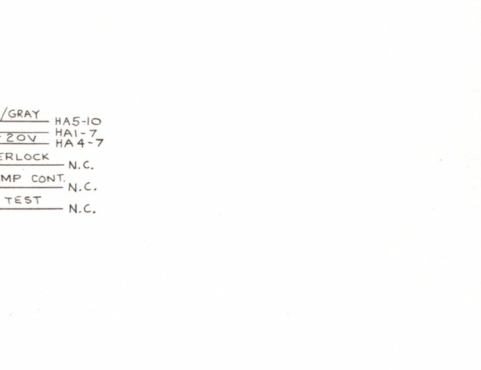
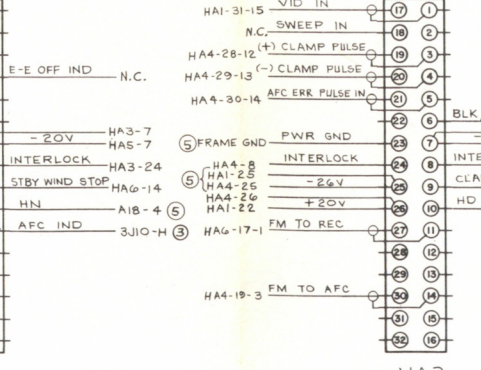
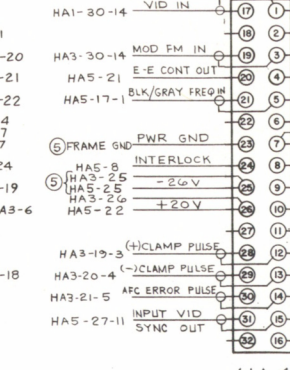
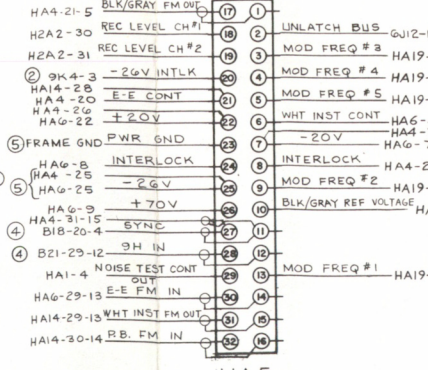
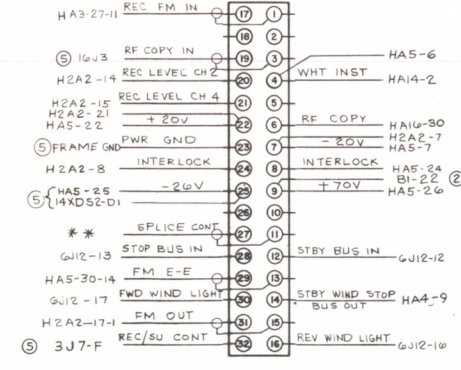
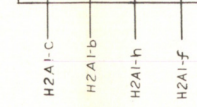


- NOTES:
 * ACCESSORY
 ** SPLICE
 1. TR-4 ONLY
 2. SOLDER AT THIS DESTINATION.
 3. WIRE CONTINUES ON FROM THIS DESTINATION.
 4. WIRE STOPS AT THIS DESTINATION.
 5. WIRE PRESENTLY IN MACHINE.

TR-22 HB CONNECTIONS



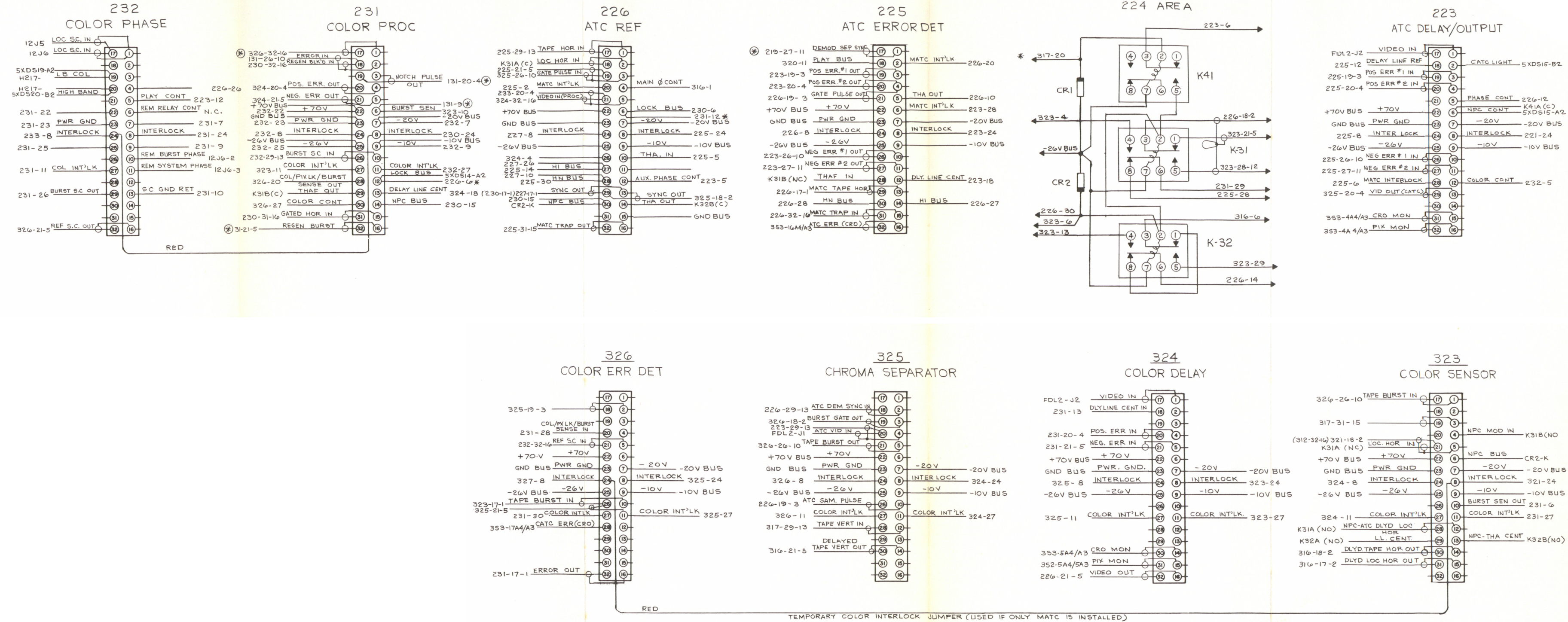
FRONT PANEL



3318655-3

TR-4 HB CONNECTIONS

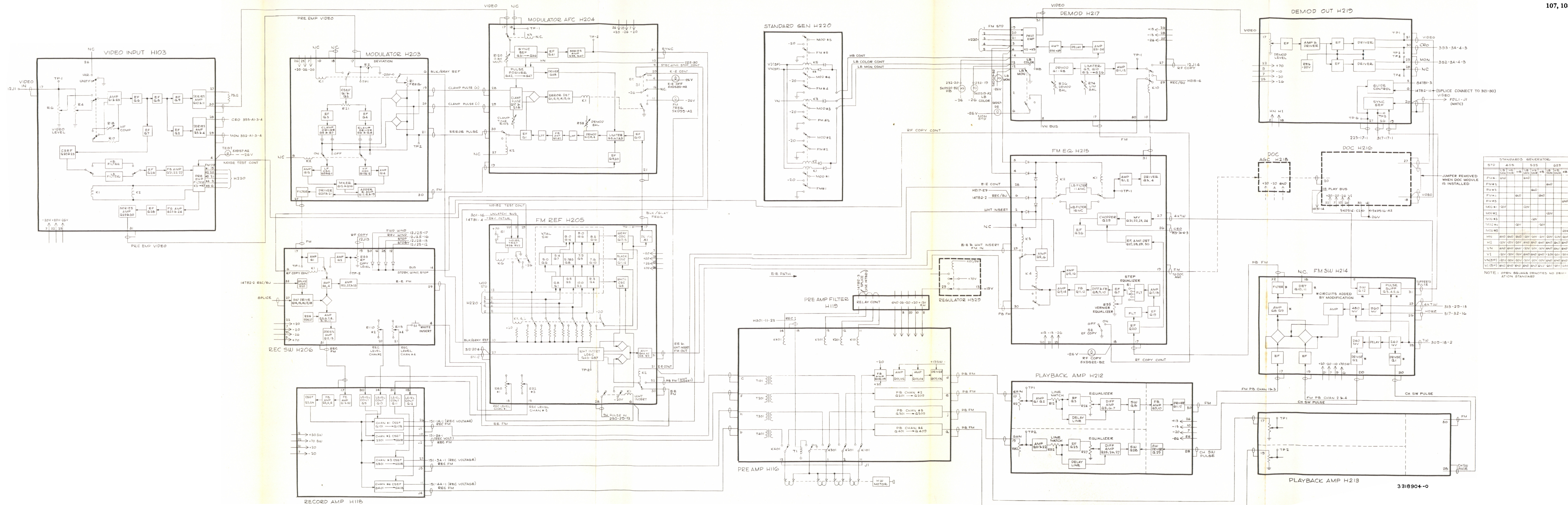
Figure 50—Record Harness Wiring (3318655)



* SOLDER AT INDICATED DESTINATION
 (PART OF DEMOD OUT HARNESS OR PROC AMP HARNESS)

Figure 51—ATC Connection Diagram (3318733)

3318733



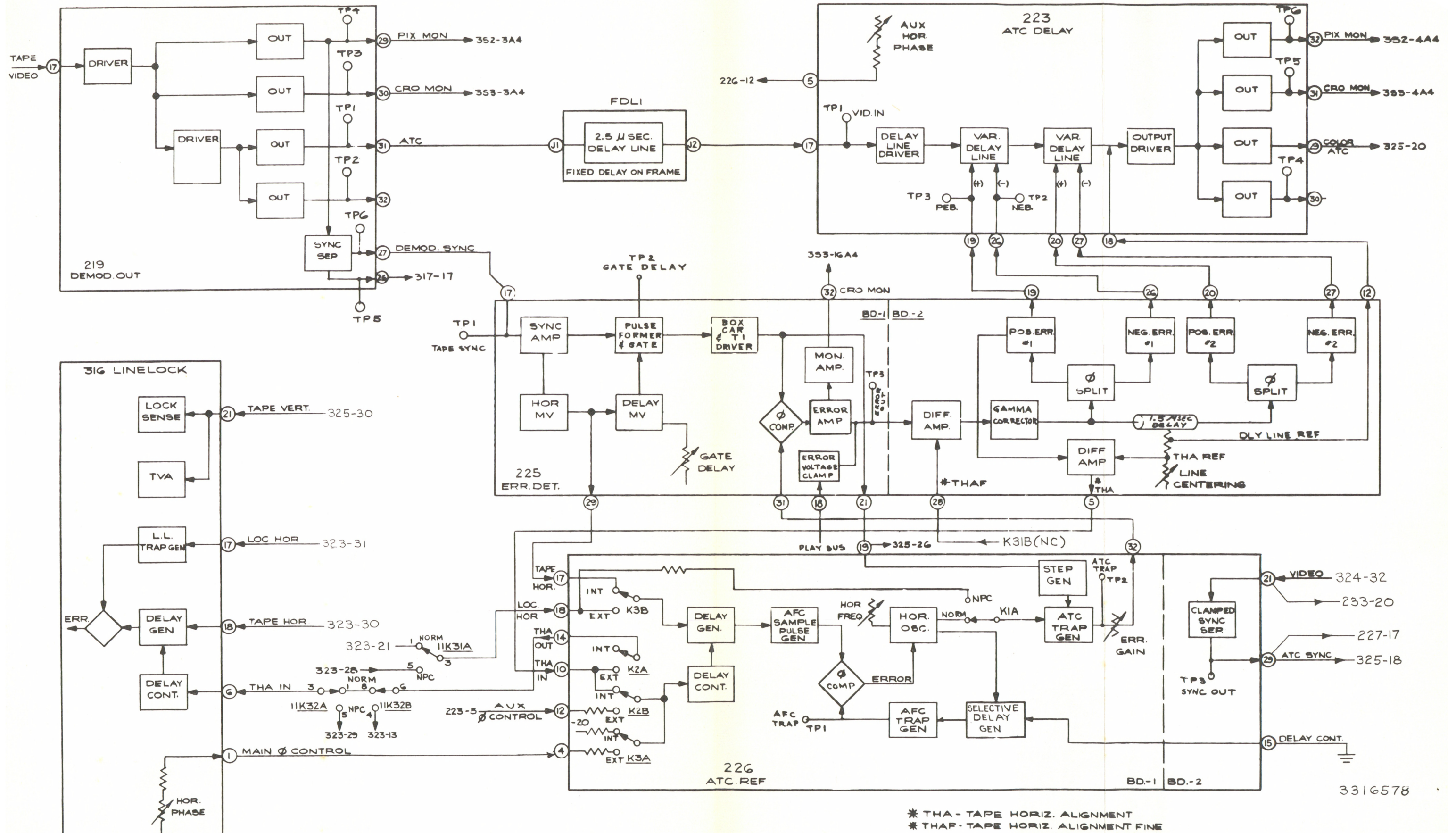


Figure 53—MATC Block Diagram (3316578)

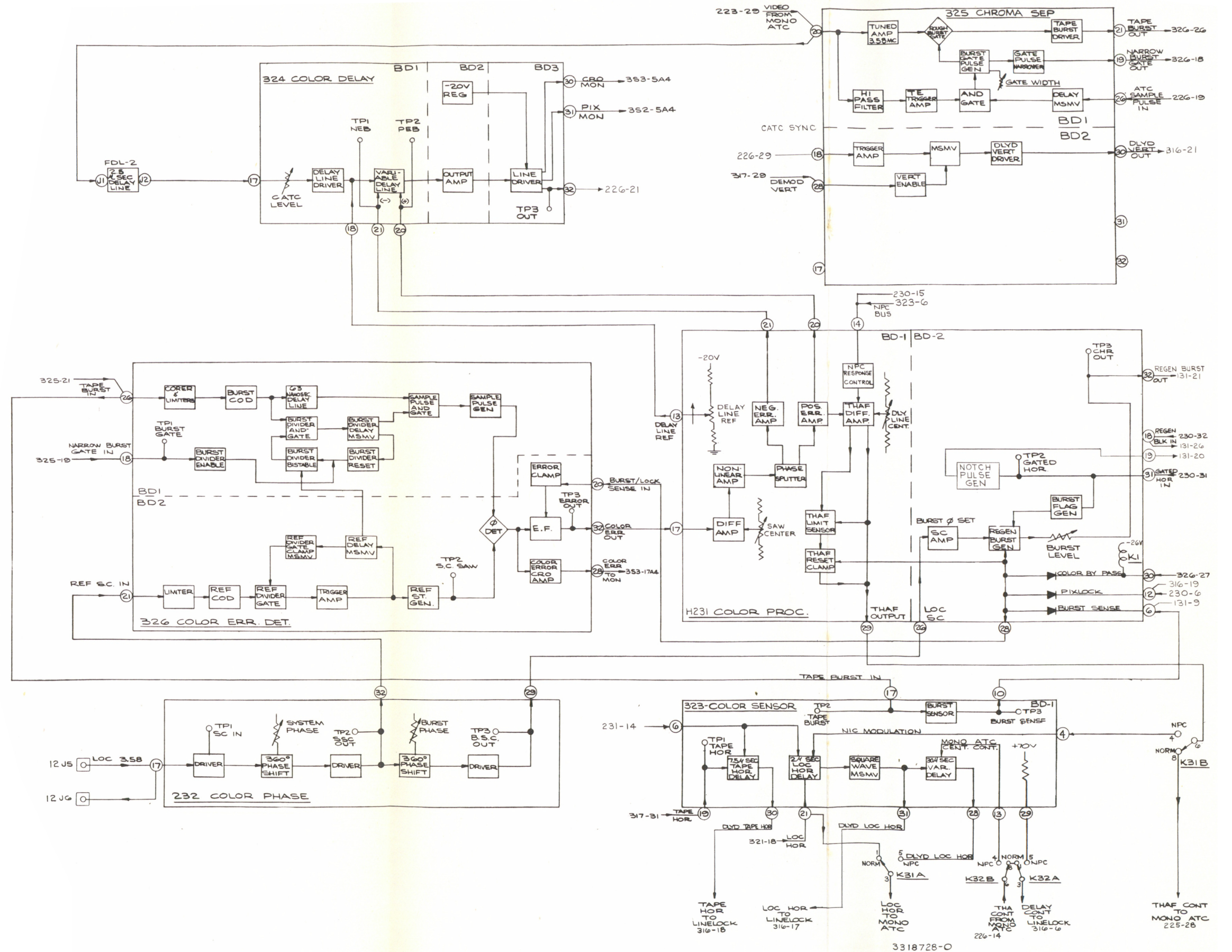


Figure 54—CATC Block Diagram (3318728)

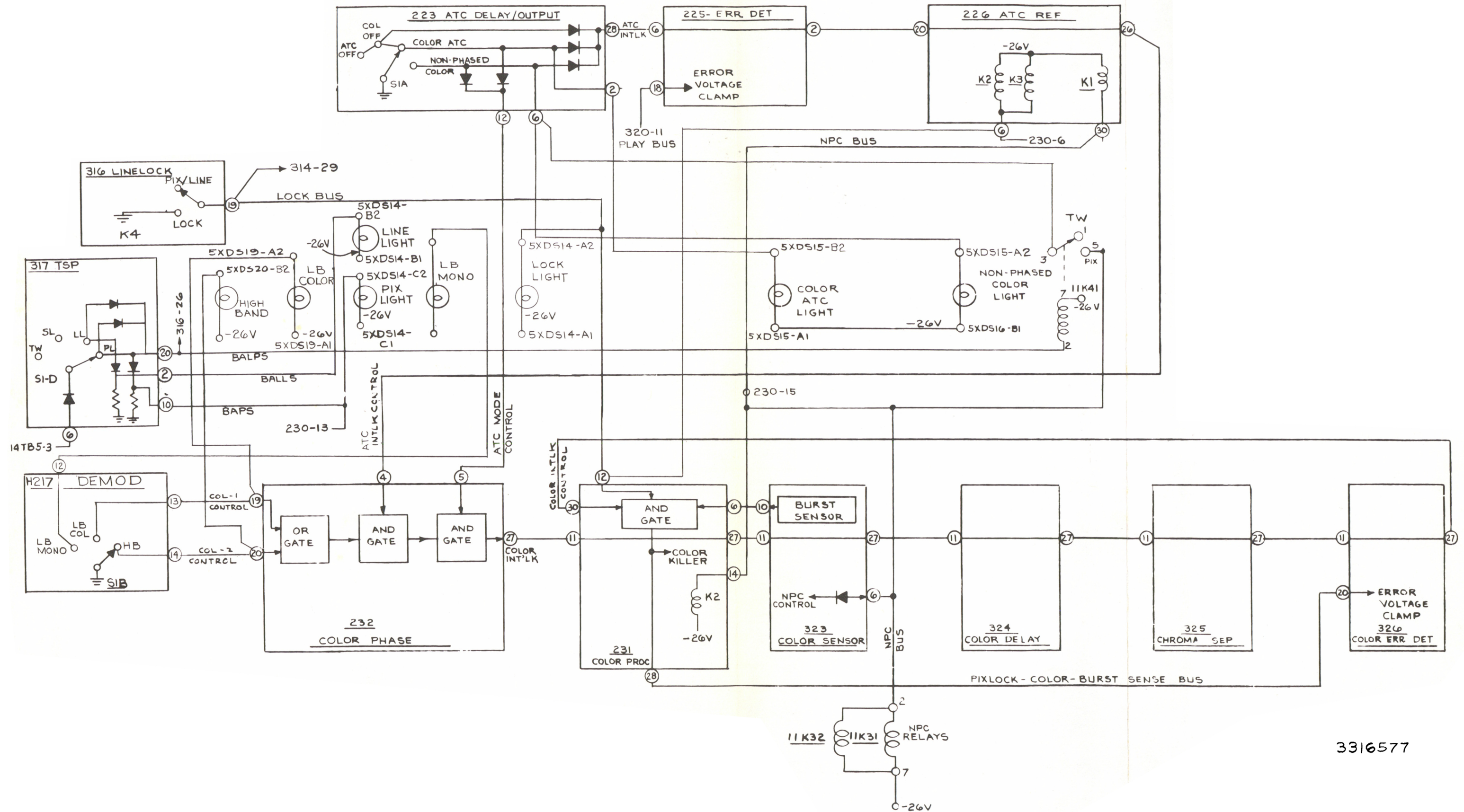


Figure 55—MATC/CATC Control Functional
(3316577)



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